A

CURRICULUM

Of

UNQUESTIONABLE VALUE

And

LASTING RELEVANCE

By

Lee R. Smith

Teacher.....Adventurer

Volume One

ASSURING LEARNING

A Records Based Program for Instructional Integrity

"The letter killeth but the spirit giveth life."
(II Corinthians 3:16)

A Curriculum of Unquestionable Value and Lasting Relevance

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# Author Biography

~~Raised by wolves, founded the city of Rome,~~

As the son of a career military man I have traveled throughout the U.S. been in Europe and out in the Pacific. As a result I have experienced a variety of cultures and sub-cultures and importantly for this book, a variety of school systems. Beginning with Kindergarten I changed schools 12 times.

While serving my own tour of duty in the military I developed my interest in education when I became responsible for On the Job Training of direct duty assigned personnel. This sometimes required I do things like teach how to read a ruler.

As an education major at Northern Arizona University I became aware of the educational reform movement and began my quest for personal excellence and a theme that would unite the curriculum and make sense of it. Perhaps I started this a little too soon, after all, until you master the skills of coloring inside the lines anything else is just scribbling.

During the six years I taught in private special education schools and two years spent as a substitute teacher I was shocked and dismayed at the conditions I was expected to teach under and the chaos of the curriculum. Because of this and believing that a person who cannot regulate their own life (divorce/child custody) is not fit for a position of public responsibility I quit the profession.

To resolve my issues with the curriculum in preparation for my return to teaching and demonstrate how clever I am to potential employers, like Machiavelli, I have written a book.

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# Preface

As part of my efforts to provide my students with the best education possible I have had reason to investigate the history of the educational reform movement. The chapter titled "The Failure of Educational Reform" is the results of that study.

In "Accounting for Learning" I present the practical application of what I have learned and reasoned from that study. This consists of two forms, a combined format for the teacher's grade and lesson plan books that is correlated with a similar revision of the student's commutative record and school curriculum guide. Together they comprise a complete instructional planning and record system that enhances and accelerates student learning, increases teacher efficiency and meets the needs of No Child Left Behind.

In "The Articulation of Instruction" I provide sample curriculums for the user to build upon and produce their own living curriculum.

As the first of three volumes composing "A Curriculum of Unquestionable Value and Lasting Relevance," "Assuring Learning" can stand alone. Its focus is not on methods; it severs no social or political ends. Its concern is for the articulation of instruction and the accounting for and of learning. My purpose is to present to teachers a straight forward plan for the continuity of learning and instruction that can be personalized quickly and at little expense to situation specific needs on different levels ranging from use in a home school to providing national standards. My intention is to provide a continuous rather than ridged format to guide and assist in the planning of group and individual learning experiences. What I am presenting is a simple task analysis of learning written in behavioral terms. For these reasons I do not consider myself to be an educational reformer but a conservator.

I wish you good teaching.

Lee R. Smith

# The Failure of Educational Reform

## The Rhetoric

To many of the people concerned with educational reform it may appear real progress is being made. They know the ‘80s were the decade of the “Back to Basics” movement that established minimum competency standards. Building on this structure the ‘90s was the decade in which standards of excellence were established. Towards this goal a self-proclaimed Education President established a program he named “America 2000.” Renamed “Goals 2000" by his successor, its objective was to provide our nation with world-class schools by the year 2000. In this spirit the state of New Jersey has produced its “Core Curriculum Content Standards.” Hailed by its developers as a major innovation it was described by an assistant commissioner in that state’s Office of Standards and Assessment as being “... more comprehensive than that of any other state’s working on the problem.”

## The Reality

Being sincerely concerned the purpose of educational reform is being achieved we must ask if this is really happening, does the rhetoric match the reality? The traditional explanation for the existence of the debate is to correct a perceived failure by our schools to provide what is described in the Constitution for the state of New Jersey as “A through and efficient education.” The provided time lines for the trends in educational reform during this century in the U.S. demonstrates the major means of determining this deficiency exists has been to compare our schools with those of other nations and cultures, identify sociological problems and determine the needs of employers. The themes and ideas of the present reform efforts are revealed by this time line to be a part of a repeating cycle of alternate emphasis between progressive social concerns and often reactionary and conservative, skills dominated programs for work force development. Rather than representing a new application of enlightenment concerning how children learn, the reform movement simply responds to those forces external to the schools: political, social, technological or economical currently dominant in society’s fears.

This constant and ineffectual tinkering with the curriculum by the reformers results in a continual change in educational strategy and emphasis that culminates approximately every ten years. The reform movement it self then is disruption to learning at least once during the years of schooling by each of our nation’s children. This makes the reform movement a symptom of rather than a cure for educational problems.

The comparisons and evaluations of our educational system have been accompanied by concern, even hysteria over eminent social, moral and economic collapse. In April of ‘92 at a dinner to “kick off” “Central Jersey 2000" the keynote speaker characterized the problem this way:

> “Our standard of Living is at stake...
> America is in a crisis of national proportions...
> The products of today’s U.S. education
> system don’t meet the knowledge and
> skills level of either today or tomorrow’s
> work force.”

The strident urgency for change demanded by many of the reformers is being accomplished on a geological time scale.

U.S. Reform Movements

1910

Movement for the professionalization of teaching.
(Estimate of only ten percent graduates of normal schools.)

1920s

Progressive Movement
(Child study.)

1930s

Essentialist Movement
(Rejected the use of the schools for social reconstruction. Teach only the essentials.)

1940s

Life Adjustment Education
(Teach for social development.)

1950s

Technological Skills
(Under former General then President Eisenhower schools were compared to those of Europe where the Iron Youth of Germany failed, in two wars, to accomplish the cultural, economic and racial dominance taught in their schools as their destiny.)

1960s

Experimentalist
(Child centered concerns.)

1970s

Back to Basics
(Schools accused of being centers for crime and drug abuse. Teach only the basics. Alternate route to certification.)

1980s

America/Goals 2000

Conference of some state governors finds American schools lacking when compared to those of Europe and Asia. Establish standards of excellence. List of seven goals drawn from both sides of the debate.

1990s Federal mandate for annual testing.

State of New Jersey
Core Course Proficiencies

May 1980 Following a five-year study on high school graduation requirements a statewide panel recommends the establishment of student proficiencies.

Dec. 1987 A panel studying the issue reports to the educational commissioner's office their findings.

June 1988 The commissioner reports the findings and recommendations to the state board of education.

May 1989 Recommendations for establishing core course proficiencies adopted by the state board.

July 1990 Panels of outstanding educators, members of business and industry meet to identify core course proficiencies.

Aug. 1990 Educators statewide review the panels' drafts of the proficiencies.

Oct. 1990 Panels meet to revise drafts based on reviews and present Core Course Proficiencies to the state board.

July 1991 Core Course Proficiencies published.

State of New Jersey
Core Curriculum Content Standards

1992-1993 Panels of outstanding educators, business people and other citizens develop preliminary draft standards in seven academic areas and career education.

1995 Similarly constituted working groups built upon these preliminary standards and engaged the public in a review process that resulted in several revised drafts.

Feb. 1996 Core Curriculum Content Standards proposed for adoption by the New Jersey State Board of Education published.

May 1996 Proposal adopted.

Evaluation

The slow progress of educational reform is made clear by the time lines presented for the national history of educational reform and of the state of New Jersey to develop its Core Curriculum Content Standards. With more study and development proposed, New Jersey's Content Standards was described by the then state educational commissioner as "general and sometimes vague." In a national comparison of standards conducted in 1996 by the American Federation of Teachers it was rated as "weak" and "doesn't go far enough."

The response to the Core Curriculum Content Standards by the schools has been to reevaluate their present curriculum to insure these standards are met. This is being accomplished through curriculum committees that review existing programs and make suggestions for revision and updating of specific areas. Referred to as fine tuning, an attempt is being made to correlate their programs with the various state wide standardized tests that are being administered to measure the success of the schools in meeting the standards which is tied into state funding. From the new formats developed by these committees recommendations for the purchase of material and resources are being made, to be acquired according to the schools' existing budget and schedule for doing so. In other words, business as usual.

To better understand what is happening it is useful to look at the recommendation for dealing with criticism and attacks on the schools found in a 1960s educator's encyclopedia. This book states critics and attackers should be invited to serve on committees and advisory councils with information, recommendations and suggestions being compiled from them so as to help all concerned arrive at an amicable understanding. Suggestions then can be incorporated into the curriculum. When last quired concerning its progress in '96, representatives of Central Jersey 2000 stated they were formed into committees.

The results of this approach can be measure through a comparison of the Core Curriculum Content Standards with the 1958-1959 Goals curriculum for the state of Arizona, "Teaching Today for Tomorrow". While the Goals curriculum is much more conversational, what concerns us here is not which one is better but their similarity. This comparison suggests the Core Curriculum Content Standards is a re-invention of the wheel. The continual return to first principles it represents reveals stagnation in the efforts of the educational reform movement.

Goals - Teaching Today for Tomorrow
ARITHMETIC

Problem Solving

To help pupils gain in ability to solve problems, the best preparation is to teach understanding of the problem and the essential facts of the problem. The important part of the problem is the question asked. The following suggestions should help the pupil in problem solving.

Have the pupil read the problem carefully, help him to understand there is no pressure, but it is important that he asks himself these questions about the problem: What does the problem ask? What am I to find out? What facts are given in the problem? What does the problem tell?

How can I use facts to answer the question? In other words, teach the child to read the problem carefully, to think about what it asks and what it tells.

Help the student to visualize the problem and understand it by: dramatizing the problem, using representative materials as substitutes for the articles of the problem, clarify words and their meanings by discussion and demonstration, give pupils practice stating facts about the problem and asking the question in their own words.

Core Curriculum Content Standards
MATHEMATICS

Standard 4.1 All students will develop the ability to pose and solve problems in mathematics, other disciplines and everyday experiences.

Descriptive Statement: Problem-solving and posing involve examining situations that arise in mathematics and other disciplines and in common experiences, describing these situations mathematically, formulating appropriate mathematical questions and using a variety of strategies to find solutions. By developing their problem-solving skills, students will come to realize the potential usefulness of mathematics in their lives.

Use discovery-orientated, inquiry-based and problem-centered based approaches to investigate and understand mathematical content appropriate to early elementary grades.

Recognize, formulate and solve problems arising from mathematical situations and everyday experiences.

Construct and use concrete, pictorial, symbolic and graphical models to represent problem situations.
Pose, explore and solve a variety of problems, including non-routine problems and open-ended problems with several solutions and/or solution strategies.
Construct, explain, justify and apply a variety of problem-solving strategies in both cooperative and independent learning

Provide much practice in story problems.

Provide practice in reading problems answering: What the problem tells and what it asks? Are they putting things together? Taking them away? Or dividing them into group? What words help us know?

Read new kinds of problems together; help children understand what is meant by the problem. Give children similar problems - using activities they usually perform.

Have children formulate their own story problems. Have them tell the class the meaning of their problem and the key words. Work problems together at first. Place each child on his own as soon as possible.

environments.

Verify the correctness and reasonableness of results and interpret them in the context of the problem being solved.

Know when to select and how to use grade-appropriate mathematical tools and methods as a natural and routine part of the problem-solving process.

Determine, collect, organize and analyze data needed to solve problems.

Recognize that there may be multiple ways to solve a problem.

Clearly the reform movement has failed. The repetitive nature of its efforts and recurring themes demonstrates an inability among professional educators, with or without the help of leaders from outside the schools, to develop, after nearly a century of effort, a curriculum that is of unquestionable value and lasting relevance. This failure indicates the focus of the debate is incorrect, the wrong questions, based on erroneous assumptions, are being asked.

## Remedy

Before significant and meaningful reform can occur, a new perspective on the problem must be obtained and a consequentially different approach implemented. Without this what has been referred to as the swinging pendulum of educational reform will remain a disruption to the educational process.

At first thought it would seem what is needed is another Locke or Rousseau, a pre-eminent intelligence of conviction and foresight to provide a new application of the available knowledge concerning education and learning. With further reflection comes the realization that education, like politics, religion or philosophy is heavily reliant on theories. History shows that all such unquantifiable and intangible things are most effective when applied by their originators. Once the founding principles and ideas of "The Enlightened One" become institutionalized, the property and responsibility of followers of average intelligence, they are misapplied or not adhered to because they are not fully understood or agreed with or even form the bases of the working philosophy of the inheritors. It is for these reasons that John Dewey spent his latter years fighting against corruptions of his educational ideas.

This is due largely to a theory having little intrinsic value. Its worth is in its usefulness, which is determined by its user's creativity and imagination. Who this person is, their beliefs, values, needs and other prior existing personal characteristics compromise with any theory they take on. Imposed as part of a job requirement it becomes degraded. Seized by an adventurer seeking a means to self-aggrandizement it is discarded. This behavior requires that anything new must be made concrete, something of substance that is adaptable to its user and the fads and fashions of the times while maintaining its essential integrity. From the two curricula presented earlier it can be seen that what we teach, 5+4=9, has remained the same. That this is a fact all children should learn is validated by history which demonstrates it to be an enduring truth despite attempts to attach to it temporal dogma. Only the rhetoric of the reformers varies according to the emphasis of those earlier identified forces external to the schools concerned children are not learning.

A further direction needed is revealed by this concern. Despite the disruption to learning caused by the reform movement, children do continue to learn, as is their biological imperative. The problem lies in knowing what they have learned.

Before an instructor can teach a student division, she must know if that student has mastered the multiplication tables. The records available to the instructor at best only imply this information. Walk into any classroom and request documentation of each student's attendance and the teacher will produce from her desk a record book detailing days present, absent and times tardy. If the day's math lesson is on division and you ask for similar documentation concerning prerequisite skill, the information will be less forthcoming. This teacher then is engaging in bad practices regardless of how clever her lesson plans and instructional material. What has been neglected or at least not properly developed because political interests place emphasis on report cards and standardized testing is the articulation of instruction and accounting for learning.

The record system presently being used serves the interest of administrators and bureaucrats. The teacher's grade book explains nothing about what a student has learned without referring it to a particular edition of a publisher's textbook. The student's cumulative record mostly lists classes taken and a grade assigned. The teacher's lesson plan book is similarly oblique and the school's curriculum guide, if available, is gathering dust on a bookshelf because it is equally useless as a tool in the daily planning for and management of a learning environment. Presenting them for direct examination can make the clearest, most convincing argument for the inadequacy or these things.

Grade book

School_____ Teacher_____

School Year_____ Semester_____

Course/Subject_____

| Students | Mon. | Tues. | Wed. | Thurs. | Fri. | Mon. | Tues. | Wed. | Thurs. | Fri. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | | | | | | | | | | |
| 2. | | | | | | | | | | |
| 3. | | | | | | | | | | |
| 4. | | | | | | | | | | |

Cumulative record

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Last Name_____ First Name_____ Parent_____ | | | | | | | | |
| Entering Date_____ From_____ | | | | | | | | |
| Transfer Date_____ To_____ | | | | | | | | |
| Left School Date_____ Reason for Leaving: | | | | | | | | |
| Rank in Class_____ | | | | | | | | |
| Summer School Dates: | | | | | | | | |
| Date Place Final Exam. Final Mark Credit | | | | | | | | |
| Classes taken: | | | | | | | | |
| Subject | First Period | Second Period | Third Period | Forth Period | Number Weeks | Final Exam. | Final Mark | Teacher |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Lesson Plan Book

| Teacher_____ | Week of_____ |
|---|---|

| | Subject | Subject | Subject |
|---|---|---|---|
| Mon | | | |
| Tue | | | |
| Wed | | | |
| Thr | | | |
| FrI | | | |

What is needed is not the creative, insightful product of a brilliant mind but the skills of a competent clerk. Not the repackaging of old ideas, learning theories and methods, but a quantification of the curriculum and a clear and precise listing of acquired knowledge and skills by each student.

# Accounting for Learning

## Using the Records Based Program

The following record and planning system solves the problem of accounting for learning and provides a substantial improvement in the planning for learning. It consists of a combined format of the teacher's grade and lesson plan books (fig.1) that is correlated with a similar revision of the school's curriculum guide and student cumulative record (fig.2).

The preparation of the curriculum guide/cumulative record requires a quantification of the user's course of study. Using the techniques of task analysis a concrete and continuous listing of the specific knowledge and performance abilities to be acquired and displayed by all students is tabulated in blocks of clear and concise instructional units (fig.3).

The objectives of these units are then entered into the grade/lesson plan book as they are taught.

With this accomplished, specific learning experiences are selected and entered into the grade/lesson plan book for which grades are assigned (fig4).

Once a student demonstrates concept mastery a notation regarding this is made on the curriculum guide that then serves as an individual cumulative record (fig.5). By this means a permanent record of individual learning across the entire spectrum of the curriculum is established that accurately describes and specifically states what a student has learned and at what rate he is learning. This then provides a foundation to be built on with future learning.

Access to this type of information increases teacher efficiency and enhances and accelerates student learning and performance. This record system is then diagnostic of individual learning deficiencies and prescriptive of learning needs. The implications for the No Child Left Behind Act involves a significant cost savings. Knowing what their students have learned, a school's teachers can devise their own annual test rather than hire a testing agency. For example, if the records indicate all students have learned to multiple 1-digit numbers times 2-digit numbers with no regrouping then an appropriate test question would be, multiple a 1-digit number times a 2-digit number without using regrouping.

| Textbook:<br><br>Resources: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| Objectives: | | |
| Lessons: | | |
| Learning Experience: | | |
| Student: | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

(Fig.1)

| Cumulative Record of:<br><br>Objectives: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| | | |

(Fig. 2)

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Multiplication | | Goals: |
|---|---|---|---|
| Basic Facts: | Displays memory knowledge of basic facts for numbers 0-9. | | |
| 1-digit numbers times: | 2-digit numbers, no regrouping. | Multiples of 10, no regrouping. | 3-digit numbers with regrouping to 10, 100 and 1,000. |
| | 3-digit numbers with internal zeros. | | |
| 2-digit numbers times: | 2-digit numbers, no regrouping. | Multiples of 10 with regrouping. | 3-digit numbers with regrouping to 10. 100 and 1,000. |
| | 3-digit numbers with internal zeros. | | |
| Larger Numbers: | Applies learned principles and methods to solve larger problems. | | |

(Fig. 3)

| Textbook: General Math<br><br>Resources: No Frills Math | | | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Study: Multiplication | | | | | | Goals: Memorization of times tables. |
|---|---|---|---|---|---|---|---|---|---|
| Objectives: | Basic Facts | | Facts for 1 and 0 | | Reversibility | | Basic Facts | | |
| Lessons: | 2 X N | | 0 X N<br>N X 0 | | 2 X N<br>N X 2 | | 3 X N | | |
| Learning Experiences: | Gen. Math p. 21 | NFN p. 36 | Gen. Math p. 18 | Gen. Math p.19 | Gen. Math p.45 | NFN p.63 | Gen. Math p.22 | | |
| Student: | | | | | | | | | |
| Amandrea | A | A | A | A | A | A | | | |
| Dick | A | A | B | A | A | A | | | |
| Jane | D | C | C | D | O | D | | | |
| Puddrick | O | D | O | O | D | O | | | |

(Fig. 4)

A = 95-100% Mastery
B = 85-94% Knowledge
C = 80-84% Further instruction needed.
D = 0-79% Failure to obtain concept.
O = Assignment not completed

| Cumulative Record of:<br>Amandrea<br><br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Study: Arithmetic Concepts | | Goals: Demonstrate ability to use arithmetic principles and methods to identify and pose mathematical problems. |
|---|---|---|---|
| Addition:<br>*Completed 10/06/LS* | States addition is putting things together. *8/06 LS* | Checks addition by redoing work. *8/06 LS* | Checks addition with subtraction. *10/06 LS* |
| Subtraction:<br><br>*Completed 10/06 LS* | States subtraction is taking things away. *9/06 LS* | Relates addition and subtraction as opposites. *10/06 LS* | Checks subtraction with addition. *10/06 LS* |
| Multiplication: | States multiplication is repeat addition of equal numbers.*10/06* | Checks answers by inverting problem. | Checks multiplication with division. |
| Division: | States division is repeat subtraction of equal numbers. | Relates division and multiplication as opposites. | Checks division with multiplication. |
| Defines and demonstrates principles of: | Commutative Property | Distributive Property | Associative Property |
| Word Problems: | Distinguishes between verbal statements that imply addition or subtraction. 9/06 LS | Distinguishes between verbal statements that imply multiplication or division. | Solves verbal problems requiring more than one-step and operation. |

(Fig. 5)

By concentrating on recording academic achievement and determining appropriate learning experiences this system contains the solution to the problem of writing a curriculum that is of unquestionable value and lasting relevance. This is accomplished by establishing congruence between the system and the user, the user being either an individual or a group ideology.

For example, after reviewing the sample mathematics curriculum the reader may decide its focus is too much on the "what" and not enough on the "why" and "how" or that the student should develop certain "attitudes" or express "appreciation" for things. These

needs of methods and philosophy can be incorporated into the system by adding them to an existing or as their own individual unit of instruction. They can also be removed according to the phase of reform currently dominant in the criticism of the schools.

For this reason my sample curriculum cannot be considered complete. It must be altered by the individual user to reflect their own style, tastes and needs within the limits of their ability and administrative constraints. By this means, the user creates their own living curriculum for which they have understanding, agreement and passion, three factors vital to the success of any conceptualization.

By allowing this creativity and by being adaptable to change, this system can maintain a stable core curriculum composed of those things that are always taught that is articulated and functioning regardless of embellishments. By this means, the disruptive influence of the reform movement and its fragmenting effects on classroom instruction will be minimized.

Failure to follow this program will not result in the collapse of our economy and the decline of civilization. Following it will not cure a host of social ills. What it will do is assist in the accomplishment of the purpose of education, the development of the individual and the amassing by the individual of diverse information and skills with the ability to use them to their advantage and society's benefit.

Use with a textbook base curriculum

The sample curriculums were developed with the intention of demonstrating the use of my record system on a district-wide level encompassing a K through 12 curriculum. The individual grade level teacher using it independently with a textbook based curriculum has a need for a much briefer composition. This person's curriculum guide and student record would look like this.

| | |
|---|---|
| Curriculum | Mathematics |
| Program of study | Arithmetic |
| Course of study | Textbook name |
| Units of instruction | Chapter titles |
| Objectives | Chapter sub-titles |

Completion of this then prepares the teacher to design lesson plans and learning outlines for the year. This results in similar benefits of accountability and efficiency but not necessarily articulation between the grades, as use on a district wide- level would provide.

Definitions

A large part of many people's vocabulary is based on context. They have heard or read certain words so many times that they have developed a sense of how to use the words without obtaining a clear definition of their meaning. For this reason, I have found it necessary to include a vocabulary for the teacher's use.

Scope - The total range of learning experiences provided in a subject or school program often used to determine the sequence in which learning experiences will be arranged.

Sequence - A following of one thing after another.

Curriculum - The total experience a learner has under the supervision of the school: mathematics, language arts, science, etc.

Program of study - An organized list of procedures such as a sub-unit of a curriculum topic: language arts: grammar, penmanship spelling; mathematics: arithmetic, geometry, algebra.

Course of study - A body of prescribed instruction. A sub-unit of the program of study: arithmetic: whole numbers, fractions.

Unit of instruction - An individual elementary or functional constituent of a whole such as a sub-unit of the course of study: fractions: fractions, decimals, percent.

Goals - Generalized statement of established purposes; frequently used interchangeably with aims.

Objectives - Specific purposes that form sub-units of units of instruction: decimals; addition with, subtraction with and so forth.

Lesson plans - Specific learning experiences designed to meet the goals and objectives of the unit of instruction.

Developmental Theories

| Sigmund Freud | Erick Erickson | Jean Piaget | Lawrence Kohlberg | Victor Lowenfeld |
|---|---|---|---|---|
| Psychosexual Development | Psychosocial Development | Cognitive Development | Developmental Aspects of Morality | Development of Creative Expression |
| Sexual components of personality development | The healthy personality | The emergence of intelligence | Dimensions of moral behavior | Creative and mental growth |
| Sexual urges are the primary motivation for behavior throughout life. | A healthy ego is developed through stages of conflict. | Intelligence consists of schemes organized into stages. | Moral behavior is learned through social interaction. | Art helps develop self-concept and creativity. |
| Oral Stage (0-2 years) Mouth is source of pleasure. Preoccupation with immediate gratification of impulse. Little reality contact. | Trust vs. Mistrust (0-1year) Mistrust of unknowns vs. inclination to trust. | Sensory Motor Stage (0-2years) Motoric intelligence World of here and now. No notion of objective reality. | Pre-moral Stage (0-91/2 years) Obedience because of fear of punishment and to receive reward. Judgments are made of totally wrong or totally right. | Scribbling Stage (0-4 years, 3 levels.) Disordered 0-18 months Random marks serve as kinesthetic activity. Contolled11/2 - 31/2 years Performed for stimulation, connection between motion and marks made. Naming 31/2 - 4 years. Imaginative thinking. |
| Anal Stage (2-4 years) Beginning of delayed gratification. | Autonomy vs. Shame and Doubt (1-4 or 5 years) Realization environment can be manipulated vs. inclination to regress for security and comfort. | Preoperational (2-7 years) Egocentric Reason dominated by perception Intuitive solutions No conserving | | |

<table>
<tr><th>Freud</th><th>Erickson</th><th>Piaget</th><th>Kohlberg</th><th>Lowenfeld</th></tr>
<tr><td>Phallic Stage<br>(4-6 Years)<br>Frequent masturbation<br>Sexual interest in parents</td><td>Initiative vs. Guilt<br>(4 or 5 - 6)<br>Discover who they are.<br>Can imagine possibilities vs. frustration of behavior.</td><td rowspan="2"></td><td rowspan="2"></td><td>Pre-schematic Stage<br>(4-7 years)<br>First representational attempts.<br>Satisfaction obtained from activity.<br>Objects are portrayed in relationship to self.</td></tr>
<tr><td rowspan="2">Latency Stage<br>(6-11 years)<br>Sexual identification.</td><td rowspan="2">Industry vs. Inferiority<br>(6-13 years)<br>Increased importance of peers.<br>Crucial to establish own significance, ability and competence vs. feelings of inferiority and insecurity.</td><td rowspan="2">Concrete Operations<br>(7- 11 or 12)<br>Ability to conserve.<br>Logic of classes and relations.<br>Development of reversibility in thought.<br>Understanding of number.<br>Thinking bound to the concrete.</td><td>Schematic Stage<br>(7-9 years)<br>Achievement of form concept.<br>Objects are placed in logical relationship to each other.<br>Gang Stage<br>(9-12 years)<br>Realism in drawings.<br>Exaggeration of size replaced by concern for details.</td></tr>
<tr><td>Conformity Stage<br>(91/2-13 years)<br>Need for approval from others.<br>Acceptance of authority.</td></tr>
</table>

| Freud | Erickson | Piaget | Kohlberg | Lowenfeld |
|---|---|---|---|---|
| Genital Stage (11 years on, 3 levels) Homosexual attachments. Interest in adult modes of sexual pleasure. | | Formal Operations (11 or 12 on) Complete generalization of thought. Propositional thinking. Ability to deal with the hypothetical. Development of strong idealism. | | Pseudo-naturalism (12-14) Development of reasoning and adult modes of expression. Development of critical attitudes. Growing concern for naturalism. |
| | Identity vs. Identity Diffusion (13 - adulthood) Conflict resides in selecting and developing one of several possible selves that may lead to diffusion of self-concept. | | Mature Stage (13 onwards) Based on rules and agreements. Individual principles. (This stage is not reached by many adults) | Decision Stage (14-17 years) Purposeful learning of technique and skills. |

As a special education teacher and like most teachers, a generalist applying what works, I frequently refer to my textbooks for information on the various developmental theories, while preparing individualized education programs for my students.

In the past this has required that I lay out several books on the dining room table held open to the appropriate pages. At dinnertime they had to be put away and afterward brought back out. Prompted by a desire for efficiency and comments about tidiness from my wife, I began searching for a better way of doing this. Of the solutions available, the best was the preceding chart outlining major developmental theories.

Cross-referenced by stages and ages, this outline presents the ideas of Freud, Piaget, Erickson, Kohlberg and Lowenfield in an easy-to-read format that stimulates thought and memory and is an aid in lesson planning. I hope you find it as useful as I have.

## Bloom's Taxonomy of Educational Objectives

Terms

KNOWLEDGE: defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states.

COMPREHENSION: converts, defends, distinguishes, estimates, explains, extends, generalizes, gives examples, infers, paraphrases, predicts, rewrites, summarizes.

APPLICATION: changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.

ANALYSIS: arranges, breaks down, classifies, codes, compares, decides which, groups, lists, separates, sequences, simplifies.

SYNTHESIS: categorizes, combines, complies, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, revises, rewrites, summarizes, tells, writes.

EVALUATION: appraises, compares, concludes, contrasts, criticizes, describes, discriminates, explains, justifies, interprets, relates, summarizes, supports.

Application

Goldilocks and the three bears

| | |
|---|---|
| KNOWLEDGE | What are some of the things Goldilocks did in the three bears house? |
| COMPREHENSION | Why did Goldilocks like the little bear's chair best? |
| APPLICATION | If Goldilocks had come into your house, what are some of the things she might have used or done? |
| ANALYSIS | What parts of the story could not have actually happened? |
| SYNTHESIS | How might the story have been different if Goldilocks had visited the three bluebirds. |
| EVALUATION | Do you think Goldilocks was good or bad? Why do you think so? |

I recently overheard a conversation between a waitress and a group of high school students at a late night diner. One student was wearing a T-shirt with the faces and names of famous black Americans on it. When challenged to do so by the waitress the group could not match up the names and faces with the reason for their celebrity. The best they could do was say Medgar Evers had some kind of dream.

The waitress then went on to demonstrate they could not estimate the cost of their meal, compute her tip, make change or name the fifty states and their capitals. In response to their comments that these things had not enriched her life or improve her material circumstances, she was just a waitress, she stated she had a richer intellectual life and made explanations for other uses.

Once the waitress had finished bemoaning the poor quality of our nation's future leaders I butted in with my comments. I pointed out that these were not future leaders, but clerks, service representatives and laborers whose jobs were being dumbed down and consequentially pay reduced by computers. With the computer doing the thinking, reasoning, computing, analyzing, etc., they were to be "fetch and carries" doing the physical manipulations dictated by the computer. This statement was not disputed by the students and made them uncomfortable.

The previous taxonomy describes those skills and abilities needed by the students to compete with and use the computer. They should be provided for in the daily lesson plans.

Blank Forms

| Textbook:<br><br>Resources: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| Objectives: | | |
| Lessons: | | |
| Learning Experience: | | |
| Student: | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Activities and Notes: | | |

(Sample for copying)

| Cumulative Record of:<br><br>Objectives: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| | | |

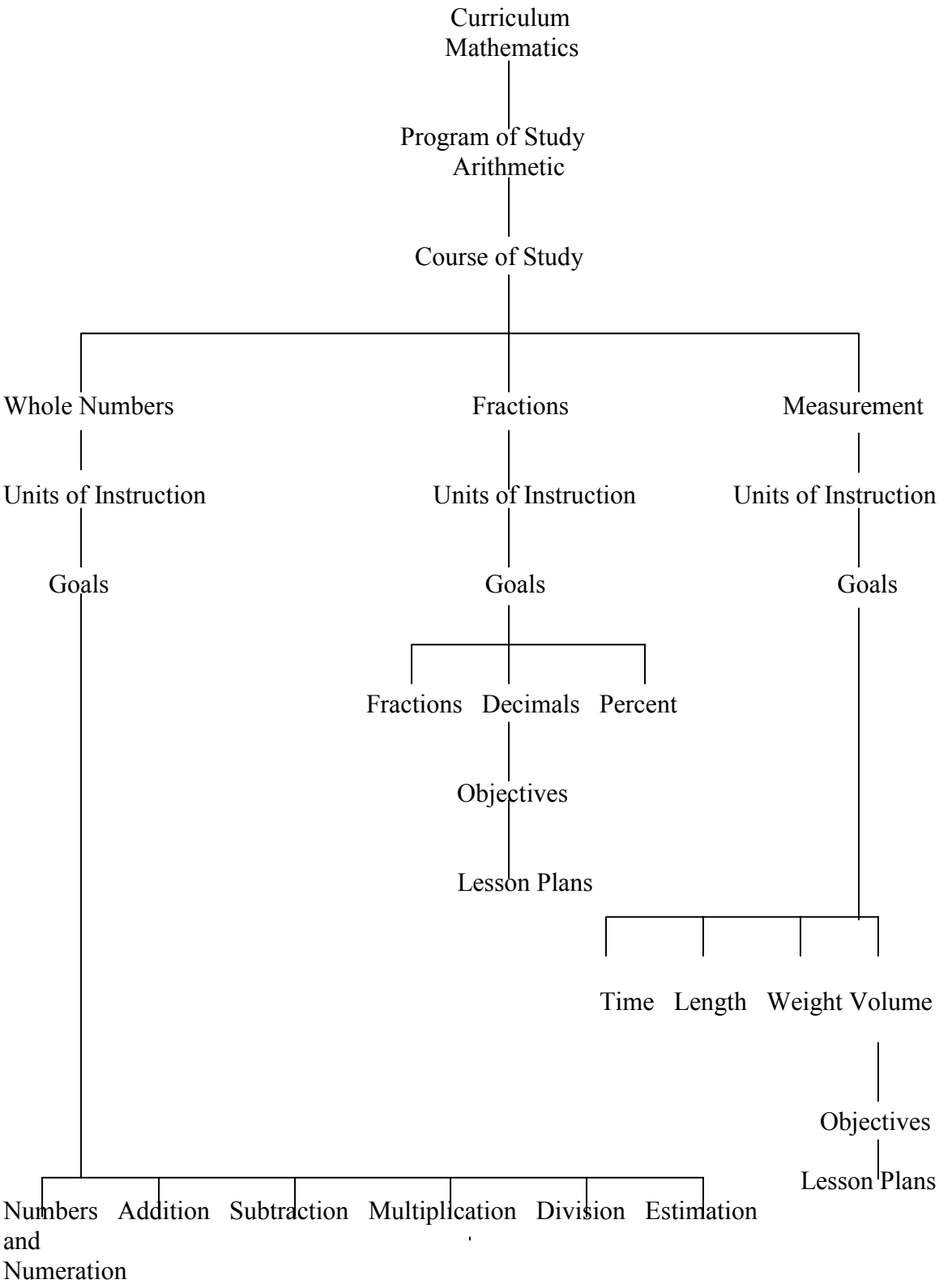
(Sample for copying)

## The Articulation of Instruction

The statement 5+4=9 has been an enduring truth regardless of attempts to attach temporal ideas to it. For this reason, I chose to develop the mathematics curriculum as an example of how to use my record system and how useful it is. To demonstrate the record system is applicable to other areas of the curriculum I have adapted it to the Language Arts curriculum as well.

I began this a long time ago before abandoning it for many years. During that time, other educators have come close to duplicating it with what is known as Curriculum Maps and electronic grade books. Do not be misled by these things. They still serve the needs of the politician and bureaucrat, ensuring that the Standards are being taught to. My record system does that and also ensures that the teacher knows what the student has learned and needs to learn without waiting for expensive testing at the benchmark years.

I bring this up to say that these curriculum maps can be easily adapted to become a part of my record system by simply transferring them to my forms. Why do I not do it for you? Remember what I said earlier about theories and intrinsic values? Make of it a living thing, something of your own.


Curriculum
Mathematics
Program of Study
Arithmetic
Course of Study
Whole Numbers
Fractions
Measurement
Units of Instruction
Units of Instruction
Units of Instruction
Goals
Goals
Goals
Fractions
Decimals
Percent
Objectives
Lesson Plans
Time
Length
Weight
Volume
Objectives
Lesson Plans
Numbers and Numeration
Addition
Subtraction
Multiplication
Division
Estimation

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Study: Arithmetic Concepts | | Goals: Demonstrate ability to use arithmetic principles and methods to identify and pose mathematical problems. |
|---|---|---|---|
| Addition: | States addition is putting things together. | Checks addition by redoing work. | Checks addition with subtraction. |
| Subtraction: | States subtraction is taking things away. | Relates addition and subtraction as opposites. | Checks multiplication with division. |
| Multiplication: | States multiplication is repeat addition of equal numbers. | Checks answers by inverting problem. | Checks division with multiplication. |
| Division: | States division is repeat subtraction of equal numbers. | Relates division and multiplication as opposites. | Checks division with multiplication. |
| Defines and demonstrates principles of: | Commutative Property | Distributive Property | Associative Property |
| Word Problems: | Distinguishes between verbal statements that imply addition or subtraction. | Distinguishes between verbal statements that imply multiplication or division. | Solves verbal problems requiring more than one-step and operation. |
| | Solves simple computations mentally. | Estimates solutions mentally. | Converts given information to other units to solve problems. (1week equal 7 days) |
| | Checks reasonableness of answers. | Applies learned principles and skills to pose and solve problems. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Numbers and Numeration | | Goals: Develop number sense and counting ability. |
|---|---|---|---|
| Sets: | Identifies sets of objectives. | Joins and separates objectives into sets. | Identifies and specifies parts of sets. |
| | Recognizes sub-sets. | Forms one-one correspondences. | Recognizes equivalent sets. |
| | Forms arrays. | Associates cardinal numbers with sets. | Uses symbols <, > and =. |
| Whole Numbers 1-100: | Writes numbers 1-100. | Recognizes place value for 1, 10, and 100. | Recognizes zero as name of empty set. |
| | Writes expanded word names for numbers to 100. | | |
| Whole numbers 100 to one billion: | Writes numbers, whole numbers and expanded word names for numbers to one billion. | Recognizes place value to one billion. | Uses a comma to denote place value. |
| Number Series: | Defines a number series as a special order or pattern. | Counts by 2, 5, and 10. | Finds the missing number in a simple sequence. |
| Roman Numerals: | States value of numerals. | Performs addition and subtraction with roman numerals. | States modern uses of roman numerals. |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Addition | Goals: Performs addition operations with whole numbers. |
|---|---|---|

| | | | |
|---|---|---|---|
| Basic Facts: | Display memory knowledge of basic facts for numbers 0-9. | | |
| Adds with no regrouping: | 3 one-digit numbers. | Two or more 2-digit numbers. | Numbers of different place value size. |
| | Numbers with internal zeros. | | |
| Adds with regrouping: | Three or more 1-digit numbers with regrouping to 10. | Two and three digit numbers with regrouping to 10, 100 and 1,000. | Regroups across zeros. |
| | Applies learned skills to pose and solve larger problems. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Subtraction | | Goals: Perform subtraction operations with whole numbers. |
|---|---|---|---|
| Basic Facts: | Demonstrates memory knowledge of subtraction facts for numbers 0-9. | | |
| Subtracts from a 2-digit number with no regrouping: | 1-digit numbers. | 2-digit numbers. | Multiples of 10. |
| Subtracts from 2 and 3-digit numbers: | 1- and 2-digit numbers with regrouping to 1's place from 10 place. | 1-, 2- and 3-digit numbers with regrouping across two places. | Regroups across zeros. |
| Large Numbers: | Poses and solves larger problems using learned skills. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Multiplication | | Goals: Perform multiplication operations using whole numbers. |
|---|---|---|---|
| Basic Facts: | Displays memory knowledge of basic facts for numbers 0-9. | | |
| 1-digit numbers: | 2-digit numbers, no regrouping. | Multiples of 10, no regrouping. | 3-digit numbers with regrouping to 10, 100 and 1,000 place. |
| | 3-digit numbers with internal zeros. | | |
| 2-digit numbers times: | 2-digit numbers, no regrouping. | Multiples of 10, no regrouping. | Multiple of 10 with regrouping. |
| | 3-digit number with regrouping to 10, 100 and 1,000. | 3-digit number with internal zero. | |
| Larger Numbers: | Applies learned principles and methods to solve larger problems. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Division | | Goals: Performs division operations with whole numbers. |
|---|---|---|---|
| Basic Facts: | Demonstrates memory knowledge of division facts of numbers 1-9. | | |
| Divides 1-digit divisors into: | 2-digit dividend with zero remainder. | 2-digit dividend with non-zero remainder. | 2-digit dividend, first digit a multiple of divisor, zero and non-zero remainder. |
| | 3-digit dividend, every digit a multiple of divisor, zero remainder. | 3- and 4-digit dividend, first two numbers a multiple of divisor, zero and non-zero remainder. | 3- and 4-digit dividend zeros in quotient. |
| Divides 2-digit divisors into: | 2 and 3-digit dividend, zero and non-zero remainders. | 4-digit dividend with 2-digit quotient, zero and non-zero remainders. | Dividends with internal zeros, zeros in the quotient. |
| Larger Numbers: | Uses learned skills to pose and solve larger problems. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Estimation | | Goals: Perform the mechanics of estimation for mentally solving math problems. |
|---|---|---|---|
| Rounding: | Rounds up and down to a specified place value. | Mentally performs arithmetic operations with rounded numbers. | |
| Averaging: | States and demonstrates methods of averaging. | | |

| Cumulative Record of:<br><br>Objectives: | | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Whole Numbers<br>Unit of Instruction: Vocabulary | | | Goals: Demonstrates ability to define and use in context mathematical vocabulary and terms. | |
|---|---|---|---|---|---|---|
| Numbers and Numeration: | Number | Whole number | Numeral | Digit | Odd number | Even number |
| | Place value | Integer | Ordinal number | Cardinal number | Set | |
| Addition: | Addition | Add | Plus | Sum | Addend | Carry |
| | Regroup | Symbol = | Symbol + | | | |
| Subtraction: | Subtraction | Subtract | Difference | Subtrahend | Borrow | Minuend |
| | Minus | Symbol - | | | | |
| Multiplication: | Multiplication | Multiply | Product | Factor | Multiplicand | Multiplier |
| | Symbol X | | | | | |
| Division: | Division | Divide | Divisor | Dividend | Quotient | |
| | Factor | Prime number | Symbols for division | | | |
| Estimation: | Estimate | Round | Average | | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Unit of Instruction<br>Unit of Instruction: Fractions | | Goals: Perform arithmetic operations using fractions. |
|---|---|---|---|
| Fractional Concepts: | States a fraction is a means of expressing a part of something. | Finds a fractional part of a whole. | Compares values of fractions with equal denominators. |
| | Compares size value of fractions with different denominators. | States and demonstrates changing forms of fractions does not alter their value. | Uses learned skills to pose and solve problems. |
| Forms of Fractions: | Reduces fractions to lowest terms. | Raises fractions to higher terms. | Finds common denominators. |
| | Determines size, value and quantity relationships by finding lowest common denominator. | Changes whole numbers and mixed fractions to improper fractions. | Changes improper fractions to mixed numbers. |
| | Simplifies and reduces answers. | Writes word names for fractions. | |
| Addition, same denominator: | Adds whole number and fraction. | Adds fractions with no renaming. | Adds mixed fractions with no renaming. |
| | Adds mixed numbers with renaming. | Simplifies and reduces answers. | |
| Addition, unalike denominators: | Changes fractions to equivalent fractions and performs addition. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Fractional Numbers<br>Unit of Instruction: Fractions | | | Goals: Continued |
|---|---|---|---|---|
| Subtraction, same denominator: | Subtracts fractions with same denominators. | Subtracts fractions from whole numbers. | Subtracts mixed numbers with no renaming. | |
| | Subtracts mixed numbers with borrowing. | | | |
| Subtraction, unalike denominators: | Changes unlike fractions into equivalent fractions and performs operation. | | | |
| Multiplication: | States and demonstrates rule for performing multiplication of fractions. | Uses cancellation to simplify problems. | Reduces answers to lowest terms. | |
| Division: | Determines reciprocal. | States and demonstrates rules for division with fractions. | Reduces answers to lowest terms. | |
| Word Problems: | States and demonstrates the term "function of" requires multiplication. (2/7 of) | Demonstrates that when given information for one thing and asked for more than one multiplication is required. (1 cost $6, how much for 3 ½) | States and demonstrates when given information for several things and asked for one division is required. (5 ½ cost $66, how much for one) | |

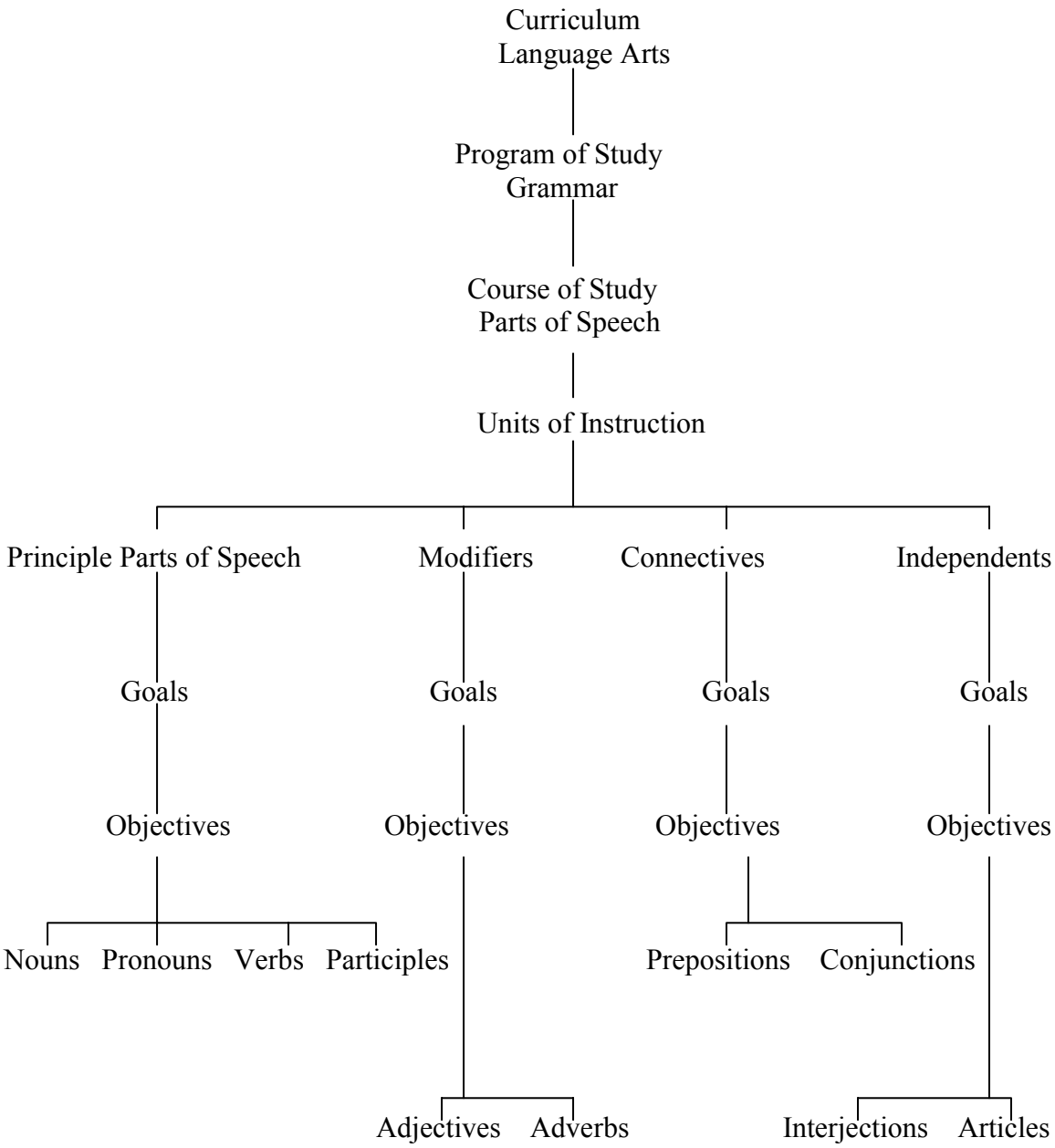
| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Factional Numbers<br>Unit of Study: Decimals | | Goals: Perform arithmetic operations using decimals. | |
|---|---|---|---|---|
| Decimal Concepts: | Defines a decimal as a fraction that obtains its denomination by place value. | Names place value to millionths using "th" to denote fraction, "and" to separate whole and fractional numbers. | States all whole numbers are followed by a decimal point. | |
| | Compares decimals by size and place value. | Uses learned skills to pose and solve problems. | | |
| Addition and Subtraction: | Explains and demonstrates rule for lining up decimal points prior to performing operation. | | | |
| Multiplication: | Explains and demonstrates rules for performing multiplication with decimals. | | | |
| Division: | Explains and demonstrates rules for division with decimals. | | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Fractional Numbers<br>Unit of Instruction: Percent | | Goals: Performs arithmetic operations using percent. |
|---|---|---|---|
| Percent Concepts: | Defines a percent as a type of fraction used in figuring discounts, sales tax and interest. | States a percent may be represented as a fraction with the denominator 100. | States in a percent a whole represents 100/100 |
| Percent Operations: | Finds a percent of a number changing the percent to a decimal. | Finds a percent of a number changing the percent to a fraction. | Finds what percent a number is of another number. |
| | Finds a whole when a percent is given. | Uses the formula Percent times whole equals part to perform the last three operations. | Uses the formula interest equals principal times rate times time to calculate interest. |
| | Uses learned skills to pose and solve problems. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Fractional Numbers<br>Unit of Instruction: Interchanging Fractions | Goals: Converts forms of fractions. |
|---|---|---|
| Fractions: | Changes fractions to decimals. | Changes fractions to percents. |
| Decimals: | Changes decimals to fractions. | Changes decimals to percents. |
| Percent: | Changes percents to decimals. | Changes percents to fractions. |
| Concepts: | States converting forms of fractions does not alter their value. | Compares size, quantity and values of commonly used forms of fractions. (1/2, .5, 50%) |

| Cumulative Record of:<br><br>Objectives: | | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Fractions<br>Unit of Instruction: Vocabulary | | | Goals: Demonstrates ability to define and use in context mathematical terms and vocabulary. | |
|---|---|---|---|---|---|---|
| Fractions: | Fraction | Mixed fraction | Improper fraction | Cross multiply | Reciprocal | Reduce |
| | Simplify | Numerator | Denominator | Lowest terms | Least common denominator | Equivalent |
| | Cancellation | Inverse | Symbol / | | | |
| Decimals: | Decimal | Mixed decimal | Symbol . | | | |
| Percent: | Rate | Part | Interest | Symbol % | | |

| Cumulative Record of:<br><br><br>Objectives: | Curriculum: Mathematics<br>Program of Study: Arithmetic<br>Course of Study: Measurement<br>Unit of Instruction: Measurement Concepts | | Goals: Use various measurement systems to perform arithmetic operations. |
|---|---|---|---|
| Units of Measurement: | Displays memory knowledge of unit terms, size and quantity relationships and equivalencies. | Uses abbreviations and symbols. | |
| Interchange of Units: | Changes from smaller units to larger. | Changes from larger units to smaller. | When changing from one unit to another expresses remainder in smaller units or fractions. |
| Arithmetic Operations: | Performs arithmetic operations with units of measure. | | |
| Time: | Tells time to the hour, ½, ¼ hour and minutes. | Names the days of the week, months of the year and seasons. | Differentiates between last, this and next. |
| Length: | Finds length in nonstandard units. | Uses a ruler to find length in inches and fraction of inches. | Uses a yard stick to find length in yards, feet, inches and fraction of inches. |
| Weight: | Compares weight of objects with volume, area and hardness. | Uses various types of scales to measure weight. | Estimates weight of familiar objects. |
| Temperature: | Reads a thermometer to find temperature. | Identifies temperature requirements for various types of safety. | |
| Volume: | Compares liquid capacity. | Measures liquids. | Estimates liquid volume. |


Curriculum
Language Arts
Program of Study
Grammar
Course of Study
Parts of Speech
Units of Instruction
Principle Parts of Speech
Modifiers
Connectives
Independents
Goals
Goals
Goals
Goals
Objectives
Objectives
Objectives
Objectives
Nouns
Pronouns
Verbs
Participles
Prepositions
Conjunctions
Adjectives
Adverbs
Interjections
Articles

| Cumulative Record of:<br><br><br>Objective: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / Nouns | | Goals: Identify and correctly use nouns according to function and context. |
|---|---|---|---|
| Nouns: | Defines and identifies common nouns. | Defines and identifies proper nouns. | Defines some nouns as abstract concepts. |
| Plural Nouns: | Forms plural of most nouns by adding an S to their end. | Forms plural of nouns ending in: S, Z, X, CH, and SH by adding ES to their end. | Forms plural of nouns ending in Y preceded by a consonant by changing Y to I and adding ES to their end. |
| | Forms plural of nouns ending in F by changing F to V and adding ES to their end. | Names exception to previous rule. (Chief-chiefs) | Forms plural of compound words and hyphenated words by adding ‘S to the significant word. (Brothers-in-law.) |
| Collective Nouns: | Identifies words made plural by changes in spelling. Man = men. | Gives examples of words that are both plural and singular. Fish, deer. | |
| Possessive Nouns: | Uses the possessive form of a noun when there is an ownership relationship. | When a possessive is plural and ends in S forms the possessive by adding an apostrophe after the S. | When a possessive word is plural and does not end with an S adds ‘S to the end of the word. |
| | Shows separate possession by placing ‘S on each word. | Shows joint possession by placing ‘S on the last participant. | Forms possessive of compound and hyphenated words by adding ‘S to the last word. |

| Cumulative Record of:<br><br><br>Objectives: | Curriculum: Language<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / Nouns | | Goals: continued |
|---|---|---|---|
| Appositive Nouns: | Identifies an appositive noun as a noun that renames or identifies the noun that comes before it in a sentence and as part of a phrase. | | |
| Nouns of address: | States a noun of address names the person being spoken to in a sentence. | | |

| Cumulative Record Of:<br><br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / Pronouns | | Goals: Identify and correctly use pronouns according to function and context. |
|---|---|---|---|
| Pronouns: | Defines a pronoun as a word that takes the place of a noun or pronoun. | States a pronoun is used when the noun it replaces has been previously specified or understood from context. | Names singular and plural forms of pronouns. |
| | States the first, second and third person and gives examples of their use. | | |
| Pronouns, Nominative Case | Defines a pronoun used as the subject of a verb or used after a form of the verb "to be" as being in the nominative case. | Identifies nominative forms of pronouns as I, you, he, she, it, we, you, they. | States when a sentence has two or more subjects both or all are in the nominative case. |
| Pronouns, Objective Case | Defines a personal pronoun used as the object of a verb or a preposition as being in the objective case. | Identifies objective case pronouns as: me, you, him, her, it, us, you, and them. | States when the pronoun I is used with other pronouns or nouns it is named last. |
| Pronouns, Possessive: | Identifies two forms of personal pronouns, one used in front of a noun, the other by itself. | Before nouns used in singular case uses: your, his, her, its. | Before nouns used as plurals uses: our, your, the, their. |

| Cumulative Record Of: Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / Pronouns | | Goals: continued |
|---|---|---|---|
| Pronouns, Possessive: | In place of singular nouns uses: mine, your, his, hers, its. | In place of plural nouns uses: ours, yours, theirs. | States possessive form of personal pronouns do not use an apostrophe. |
| Pronouns, Reflective and Intensive: | Explains reflective pronouns reflect back to the subject. | States intensive pronouns emphasize the noun. | States reflective and intensive pronouns end in "self" when singular, in selves when plural. |
| | States that reflective and intensive pronouns are never used as subject or verb. | | |
| Pronouns, Indefinite: | States an indefinite pronoun refers to an unspecified noun, singular or plural. | Gives examples of indefinite pronouns as: every, any, some, other, no and words indicating quantity such as: one, both, few, several, less, many, much, more, all, either, and neither. | States indefinite pronouns area not used before nouns. If they are then they are adjectives. |

| Cumulative Record of:<br><br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / verbs | | Goals: Identify and correctly use verbs according to function and context. |
|---|---|---|---|
| Verbs: | Defines verbs as words that express action-physical or mental. | States verbs can be used in the active voice (shows action) or in the passive voice (shows subject acted on). | Identifies two types of verbs: action and linking. |
| Verbs, Simple Tense: | States verb tense shows time: past, present and future. | States when in the present tense and used with singular or third person pronoun the verb usually ends with S. | States when in the past tense regular verbs always end in ED. |
| | States the future tense contains two words, the auxiliary verb "will" or "shall" plus the basic form of the verb. | | |
| Verbs, Perfect Tense: | States the perfect tense is used for actions that have been or will be completed. | States a perfect tense begins with some form of the verb "have" as an auxiliary. | |
| Verbs, Progressive Tense: | Identifies the progressive tense as showing continuing action. | Demonstrates making a progressive tense by combining some tense of the auxiliary verb that ends in "ing". | States the "ing" form of a verb is known as the present participle. |
| | States all progressive tenses contain a present participle that follows a form of the auxiliary verb "be". | | |

| Cumulative Record Of: Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech / Verbs | | Goals: continued |
|---|---|---|---|
| Verbs, Action: | Identifies two types of action verbs:<br>Transitive-an action verb followed by a direct object.<br>Intransitive-not followed by a direct object but often by an adverb or adverbial phrase. | | |
| Verbs, Linking: | Defines linking verbs, as verbs that tell what something or someone is. | Identifies words I, she, and they as words to be linked with words that describe or identify them. | States the most common linking verbs are: am, is, are, was, we, be, been and being, all of which are forms of "to be". |
| | Defines the verbs for the five senses as linking verbs. | Identifies words that can be action or linking verbs, according to use. | States a linking verb is always followed by a predicate nominative or predicate adjective. |
| Verbs, Active and Passive: | States that in a sentence with a transitive verb in which the subject is doing something to the object, the verb is active. | States in a sentence using a transitive verb, where the subject not doing the action but receiving it, the verb is passive. | Sates an active verb sentence can be changed to passive by making the direct object of the sentence its subject. |
| Irregular Verbs: | Identifies irregular verbs as those whose past tense and past participle are not formed by adding D or ED. | Names the past tense, present tense and past participle of some common irregular verbs:<br>Do (es) did done<br>Come (s) came come | |
| Auxiliary Verbs and Verb Phrases: | States every sentence requires a complete verb. | States a verb phrase is composed of two or more verbs that function together in a sentence. | Identifies the more important verb carrying the action in a sentence as the main verb, others as helping or auxiliary verbs. |

| | | | |
|---|---|---|---|
| Cumulative Record Of:<br><br><br><br>Objectives: | Curriculum Language Arts<br>Program of Study Grammar<br>Course of Study Parts of Speech<br>Unit of Instruction Principle Parts of Speech/Verbs | | Goals: Identify and correctly use participles, gerunds, Infinitives, verbals and verbal phrases. |
| Auxiliary Verbs and Verbal Phrases: (Continued) | States in a verb phrase the main verb comes last, the helper first. | States a verb phrase contains only one main verb but can have a number of helpers. | Names as important helping verbs the words: shall, should, can, could, will, would, may, might and must as well as forms of the words be, have and do. |
| Participles: | Identifies participles as having two forms: a present verb that always ends with ING and a past verb that ends in ED if irregular. | Defines a participle as a nominal form of a verb that is used with an auxiliary verb to indicate certain tenses and that can also function independently as an adjective. | States that participles work with auxiliary verbs to form perfect tenses, progressive tenses and the passive forms of the main verb. |
| | Gives examples of participles used as adjectives to modify nouns. | Determines if a participle is an adjective. | States a participle is always used as an adjective or as part of a verb phrase, and never as the subject of a sentence. |
| Gerunds: | Defines a gerund as a verb form that ends in ING and used as a noun and the subject of a sentence. | | |
| Infinitives: | Identifies infinitives as verbs with the word "to" in front of them. | States an infinitive is never used as the verb in a sentence but as a noun. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Principle Parts of Speech | | Goals: |
|---|---|---|---|
| Verbals<br>And Verb Phrases: | States that participles, gerunds and infinitives are all verbals; verbs that are used as nouns, adjectives and adverbs. | States that because verbals are verb forms, they are followed by or modified by the same kinds of words as verbs. | States that when a verbal is a form of a transitive verb, it can be followed by a direct object. |
| | States a verbal that is a form of a linking verb can be followed by a predicate noun, predicate pronoun or predicate adjective. | | |

| Cumulative Record of:<br><br>Objective: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Modifiers | | Goals: |
|---|---|---|---|
| Adjectives: | Defines an adjective as a word that modifies a noun or pronoun by limiting, qualifying or specifying it. | Uses adjectives closely before the noun or pronoun they modify. | |
| Predicate Adjectives: | Indicates that an adjective can come after a linking verb and is then part of the predicate when it modifies the subjective. | | |
| Absolutes: | Identifies absolutes as not using descriptive terms of degree. | States the use of an adjective for an adverb is a serious language error. | |
| Clarity: | Places adjectives as closely as possible to the word being modified. | States adjectives can be used to modify after “to be” verbs and verbs of sense. | When compounded, adjectives are used before a noun as a single modifier, and the words are hyphenated. |

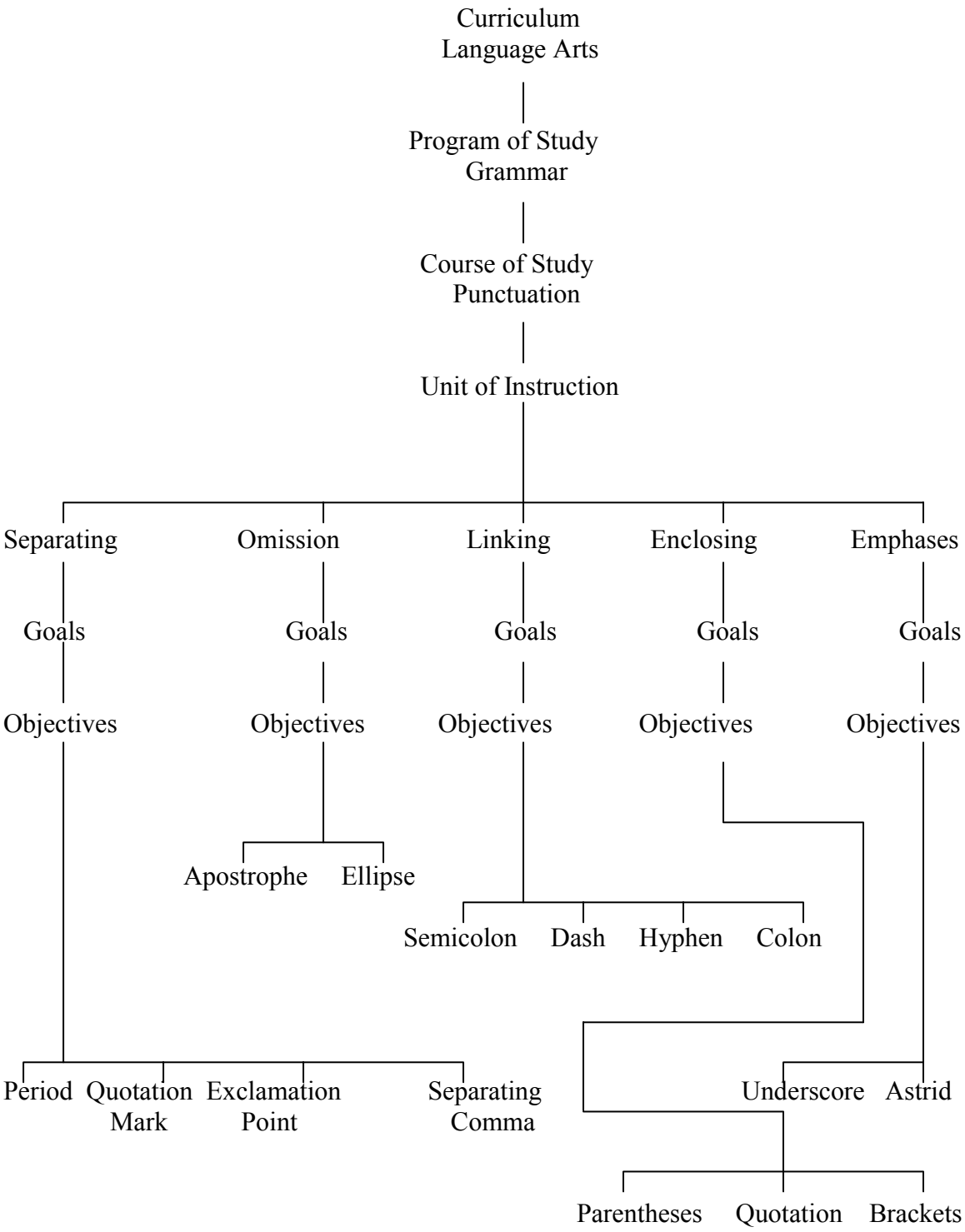
| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Modifiers | | Goals: |
|---|---|---|---|
| Adjectives, Comparative and Superlative: | Identifies common adjective endings as: er, est, ous, able. | Identifies three degrees of comparison:<br>Positive- no comparison<br>Comparative- compares two nouns<br>Superlative- compares three or more nouns. | Forms comparatives and superlatives by adding ER or EST to most one-syllable adjectives. |
| | Uses the words "more" and (the) "most" with adjectives or three or more syllables to form comparatives and superlatives. | Forms comparative and superlative of two syllable words by changing Y to I and adding ER. | States irregular one-syllable adjectives form comparatives and superlatives by changing their form:<br>Good-better-best<br>Bad-worse-the worst |
| Pronouns and Adjectives: | States and demonstrates how use in context can change pronouns into adjectives. | States pronouns used as adjectives always modify nouns and pronouns that follow them and are never part of the predicate. | Identifies three types of pronouns that can become adjectives:<br>Demonstrative: this, these<br>Indefinite: some, all<br>Interrogative: which, whose (but not who or whom) |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Modifiers | | Goals: |
|---|---|---|---|
| Nouns as Adjectives: | States possessive nouns can be used like adjectives to modify other nouns. | | |
| Degrees of Comparison: | Identifies three degrees of comparison using adjectives:<br>Positive: no comparison<br>Comparative: used to compare two things and ending in ER.<br>Superlative: Used to compare three or more and ending in EST. | When forming comparatives and superlatives of three or more syllables uses the words "more" and (the) "most" in place of ER and EST ending. | Identifies words that change their form in the comparative and superlative degree: Little – less – least. |
| Adverbs: | Identifies adverbs as words that modify verbs, usually by telling how, when and where. | States adverbs can be placed before the verb they modify, after the modified verb and even before the subject. | States adverbs can modify adjectives, verbs and other adverbs. |
| Adjectives as Adverbs: | States adjectives are often changed to adverbs by adding LY. (words ending in Y change Y to I). | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Connectives | | Goals: |
|---|---|---|---|
| Prepositions: | Defines a preposition as a word that indicates the relationship of a substantive to a verb, adjective or other substantive. | | |
| Prepositional Phrases: | Defines a prepositional phrase as one that begins with a preposition and ends with a noun or pronoun. | States a prepositional phrase answers the question "where." | |
| Objects of Prepositions: | States a preposition must be followed by a noun or pronoun that is the object of it | Recognizes that nouns are objects that prepositions can modify. | States personal pronouns that are objects of prepositions must be in the objective case. |
| | States used as adjectives prepositional phrases add meaning to the noun or pronoun in the sentence. | States used as adverbs prepositional phrases add to the meaning of the verb or verb phrase in a sentence. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Units of Instruction: Connectives | | Goals: |
|---|---|---|---|
| Conjunctions: | Defines conjunctions as words that join together words, parts of sentences and whole sentences. | Names the most common conjunctions as being: and, but, or. | |
| Coordinating Conjunctions: | States coordinating conjunctions join equal or similar things; nouns, verbs, subjects, predicates and sentences. | Names the seven coordinating conjunctions as: and, but, or, nor, so, yet. | |
| Compound Sentences and Independent Clauses: | Defines a compound sentence as two sentences joined by a conjunction. | States in a compound sentence each part is termed a clause that contains a verb and subject. | States the words for "so" and "yet" are conjunctions only when they join sentences or predicates. |
| Correlative Conjunctions: | States when the conjunctions and, or, and nor are paired with the words both, either and neither, they are correlative. | Identifies the three possible pairings of correlative conjunctions as:<br>Both-and<br>Either-or<br>Neither-nor | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Parts of Speech<br>Unit of Instruction: Independents | | Goals: |
|---|---|---|---|
| Interjections: | Defines an interjection as a word or phrase that expresses strong emotions, usually when something sudden or unexpected happens. | States interjections can show feelings: happy, sad, anger, pleasant or unpleasant. | Uses a comma for mild interjections when linking sentences, an exclamation point for strong. |
| Articles: | Identifies the, a and an as different forms of the same word or idea and as an adjective. | States "the" is a definite article that names a particular, definite noun. | States the words "a" and "an" are indefinite articles referring to any single member of a group. |
| | Uses "a" before a consonant sound, "an" before a word beginning with a vowel or silent H. | | |


Curriculum
Language Arts
Program of Study
Grammar
Course of Study
Punctuation
Unit of Instruction
Separating
Omission
Linking
Enclosing
Emphases
Goals
Goals
Goals
Goals
Goals
Objectives
Objectives
Objectives
Objectives
Objectives
Apostrophe
Ellipse
Semicolon
Dash
Hyphen
Colon
Period
Quotation Mark
Exclamation Point
Separating Comma
Underscore
Astrid
Parentheses
Quotation
Brackets

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Separating Marks | | Goals: Use punctuation in writing to match the rhythm and emphasis of speech to better clarify written communication. |
|---|---|---|---|
| Period: | Uses a period to mark the end of a declarative sentence. | Uses a period at the end of a request for action or an indirect question. | Leaves two spaces after a period ending a sentence before beginning another. |
| Question Mark: | Places a question mark at the end of a direct question requiring an answer. | In a series of related questions, places a question mark after each item. | Follows a statement intended as a question with a question with a question mark. |
| Exclamation Point: | Uses exclamation points to give unusually strong emphasis to a word, phrase, clause or sentence. | Selects words that convey meaning to eliminate misuse and overuse of exclamation points. | |
| Comma: | Uses a comma when necessary for the clarity of a sentence and to indicate a pause in speech. | Does not use a comma between parts of a compound subject or compound verb, a subject and its verb or to separate a noun and adjective. | Places a comma before the coordinate conjunction or, nor, and, but, so, yet, that joins the independent clauses in a compound sentence. |
| | Separates the elements of a series of three or more items with commas. | Sets off an unnecessary noun, noun phrase, adjective clause or adverb clause from the rest of the sentence with a comma. | Uses a comma to separate parenthetical, introductory or transitional items. |

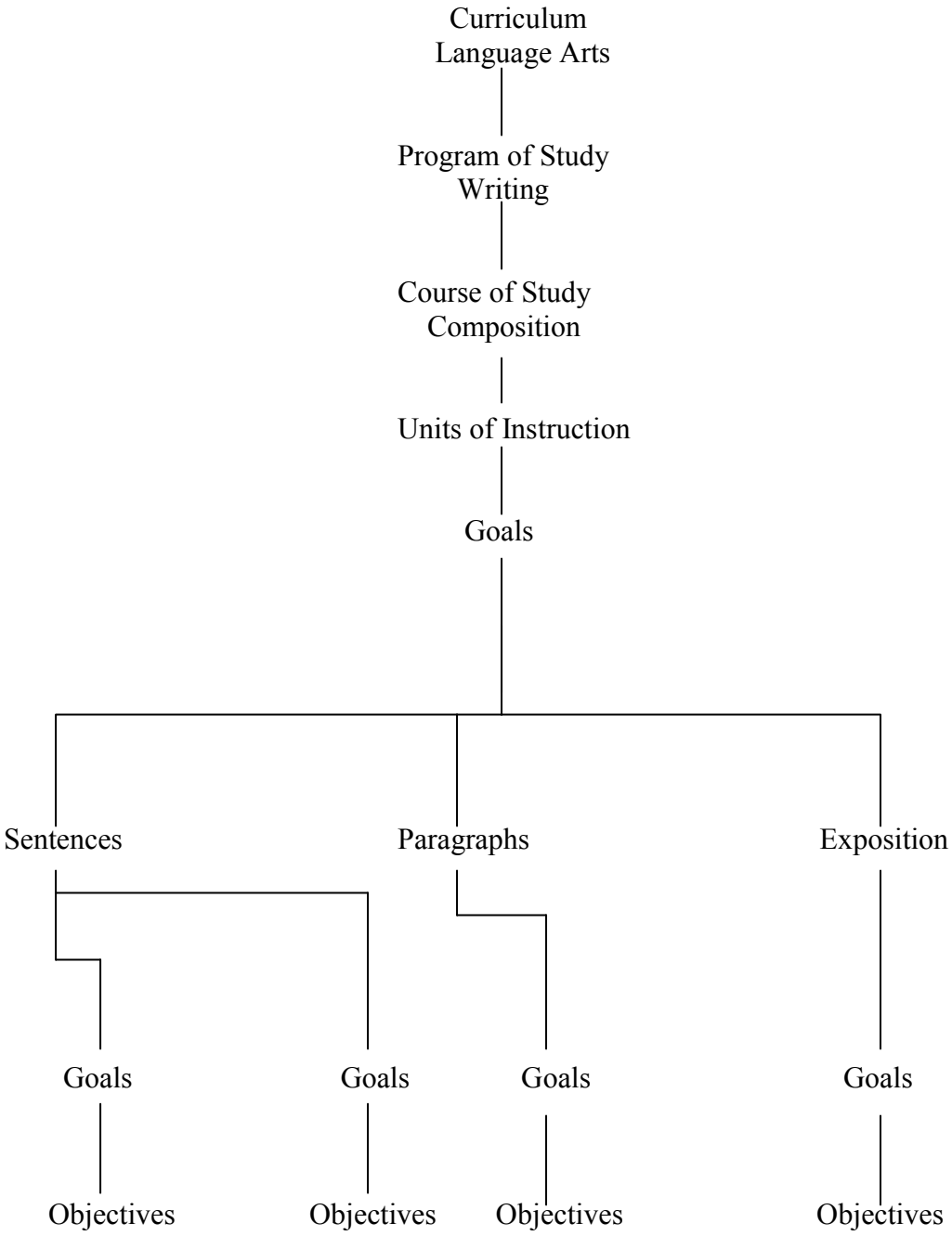
| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Omissions | | Goals: |
|---|---|---|---|
| Ellipsis: | Uses an ellipsis to indicate that one or more nonessential words have been omitted from a quoted sentence or paragraph. | | |
| Apostrophe: | Uses an apostrophe to indicate letters are missing when words are combined into one. | Uses an apostrophe to form contractions using the following words with others: not, is, are, am, will, have, would, has. | |
| | Uses ’06, etc., when the contents of the sentences indicate which numbers are missing. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Linking | | Goals: |
|---|---|---|---|
| Semicolon: | Uses the semicolon to mark a major break in a sentence that is longer than a comma but shorter than a period. | Uses a semicolon to separate independent clauses when there is no connective word. | Uses a semicolon to separate independent clauses joined by a conjunctive adverb that it proceeds. |
| | Uses a semicolon to separate two separate independent clauses joined by a transitional phrase. | Uses a semicolon to connect a compound sentence with a coordinate conjunction that has commas within one of the independent clauses. | Uses a semicolon to separate items that contain internal punctuation. |
| Dash: | Uses a dash to mark an abrupt change or to emphasize information that follows. | Uses a dash to introduce a list when a mark less formal than a colon is needed to introduce a list. | Uses a dash to introduce a summarizing statement after a listing. |
| | Uses a dash to set off a particular group that contains commas. | Uses a dash to show hesitation in speech. | Uses a dash to separate a word between syllables when there is not enough space at the end of a line to finish writing a word. |

| Cumulative Record of:<br><br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Linking | | Goals: |
|---|---|---|---|
| Hyphen: | Uses a hyphen to connect words used as a one-thought modifier. | Does not use a hyphen when the one thought modifier follows the noun. | Uses a hyphen between compound numbers that are spelled out. |
| | Uses a hyphen between two words preceding a noun that forms a single idea. | Does not hyphenate expressions ending in LY. | Hyphenates words beginning in self, e.g. Self-control. |
| Colon: | States a colon directs attention to what follows. | States a complete thought should precede a colon. | Uses a colon in a sentence preceding a formal list. |
| | Uses a colon in a formal introduction for a quotation of explanation. | In literary references uses a colon to separate title and subtitle, volume and page, chapter and verse. | Places colons outside closing quotation marks and parentheses. |

| Cumulative Record of:<br><br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Enclosing | | Goals: |
|---|---|---|---|
| Parentheses: | Uses parentheses to include extra information in a sentence. | States parentheses de-emphasizes what ever appears inside them. | When used in a sentence, places applicable punctuation outside the parentheses. |
| Quotation Marks: | Uses quotation marks to enclose the exact words spoken by someone.<br><br>Uses quotation marks for a stated title, book, song, etc. | In short quotations uses a comma to precede it, a colon if the quotation is long. | Encloses in quotation marks the correct punctuation for the material quoted. |
| Brackets: | For material within parentheses, uses brackets to insert material. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Grammar<br>Course of Study: Punctuation<br>Unit of Instruction: Emphasis | | Goals: |
|---|---|---|---|
| Underscore: | Uses the underscore to emphasize material. | Underscores words referred to as words and words in definitions. | |
| Asterisk: | Uses an asterisk to indicate a footnote. | | |


Curriculum
Language Arts
Program of Study
Writing
Course of Study
Composition
Units of Instruction
Goals
Sentences
Paragraphs
Exposition
Goals
Goals
Goals
Goals
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Objectives

| Cumulative Record Of: Objectives: | Curriculum: Program of Study: Course of Study: Unit of Instruction: | Language Arts Writing Composition Sentences | Goals: Form correct and interesting sentences. |
|---|---|---|---|
| Sentence Recognition: | Defines a sentence as a complete thought containing two main parts: a subject noun and a predicate that talks about the noun. | Names three basic sentence patterns:<br>Subject and action verb.<br>Subject, action verb, and direct object.<br>Subject, linking verb and predicate noun. | |
| Sentence Subject: | Identifies as the direct object of a sentence a word that tells who or what receives the action of the verb. | States a direct object is either a noun or pronoun. | States a personal pronoun that is a direct object must be in the objective form. |
| | States that a word that tells to whom or what or for whom or what something is done is the direct object. | | |
| Simple Predicate: | Identifies the part of the sentence that tells what the subject is or does as the predicate. | States the predicate of a sentence usually follows the subject and is the normal order. | States when all or any part of the predicate comes before the subject it has inverted order |
| | Identifies a word that follows a linking verb and renames the sentence subject as the predicate nominative, | States a predicate nominative must be either a noun or pronoun. | |
| Subject /Verb Agreement: | States subject and verb must agree in reference and number. | States third person singular or regular verbs end with S. | Uses a plural verb with a plural subject. |

| Cumulative Record Of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Sentences | | Goals: Form correct and interesting sentences. |
|---|---|---|---|
| Sentence types and Classifications: | Identifies four types of sentences: Declarative Interrogative Imperative Exclamatory | Defines a declarative sentence as one that makes a statement and ends with a period. | Defines an interrogative sentence as one that asks a question and ends with a question mark. |
| | Defines an imperative sentence as one that gives a command and ends with a period or exclamation mark. | Defines an exclamatory sentence as one expressing strong feelings or loudness and ends with an exclamation point. | |
| Descriptive Sentences: | Uses adjectives, adverbs and prepositional phrases to make sentences more vivid, descriptive and interesting. | Uses synonyms to alter and direct effect of sentence. | States how using general words (my pet) or more specific words (my dog) can influence the meaning and understanding of a sentence. |
| Combining and Connecting Sentences: | Uses compound subjects to join short, choppy sentences. | Uses compound predicates to join short, choppy sentences. | Uses coordinating conjunctions to create compound sentences. |
| | Improves sentences through the use of subordinating con-junctions to create complex sentences. | | |
| Incorrect Sentences: | Defines run-on sentences as those that contain incorrectly two or more sentences. | Avoids repetition by not using words that repeat the same information in a sentence. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Paragraphs | | Goals: Writes correct paragraphs. |
|---|---|---|---|
| Topic Sentences: | Defines a paragraph as a related group of sentences relative to a main idea expressed in the topic sentence. | Defines the topic sentence as usually beginning a paragraph and defining its subject. | Makes logical connections and transitions between sentences in a paragraph. |
| | Focus all sentences on the topic or subject of a paragraph. | | |
| Paragraph Organization: | Writes sequential, time ordered, logical progression paragraphs. | Includes relevant information in paragraph of who, when, what, where, how and why. | Shows logical connections using transition words. |
| Repetition: | Avoids repeating information in a paragraph. | Separates run on sentences. | |

| Cumulative Record Of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Paragraphs | | Goals: |
|---|---|---|---|
| Descriptive Paragraphs: | Writes paragraphs that provide visual imagery. | Writes paragraphs that explain a procedure. | |
| Factual Paragraphs: | Writes paragraphs that contain information that is true and verifiable. | Recognizes the difference between fact and opinion. | |
| Persuasive Paragraphs: | Writes paragraphs with the intent to influence someone's opinion. | | |
| Summary Paragraphs: | Writes paragraphs that condense information from more extensive work to its main points or interesting information. | | |
| Sequence of Events: | Uses chronological order to sequence events in a narrative. | Uses logical order to sequence a description. | |
| Logical Connections: | Names transition words that help show logical connection between two sentences or paragraphs such as: thus, in addition to. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Exposition | | Goals: Produce clear and concise writing. |
|---|---|---|---|
| Writing in Sequence: | Uses chronological, or time, order To sequence events. | Uses logical order to sequence a description. | Varies a chronological sequence of events in a story using flashbacks to tell about something that happened earlier, by telling about simultaneous actions in different places, or by foreshadowing future action. |
| | Adds adverbs to writing to give specific information about how, when, or where. | Uses specific verbs to do the job of a verb-adverb combination when possible. | Writes an outline to follow. |
| Cause and Effect: | Uses the topic sentence in a cause-and-effect story to describe a cause with the remainder of the story giving effect, or to describe an effect with the story giving causes. | Lets the reader discovery the cause or causes in a written mystery with the crime or fearful situation the effect. | Goes from observed effects to probable cause when writing about a science experiment. |
| | When using syllogisms, begins with a generalization then reasons to a specific conclusion. | Uses connecting words, such as prepositions, conjunctions and relative pronouns, to link sentences and to make cause-and-effect relationships clear. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Exposition | | Goals: |
|---|---|---|---|
| Writing Details: | Uses details to support and describe a topic. | Uses details to create a mood. | Uses modifiers to make writing clear and specific. |
| | Removes unnecessary modifiers and misplaced or dangling modifiers. | | |
| Writing Comparisons: | States comparisons show likenesses, contrasts show differences. | Explains the unfamiliar by comparing it to the familiar. | Uses point-by-point order or parallel order when writing a comparison-and – contrast paragraph. |
| | Uses figurative language such as similes, metaphors and personification to make comparisons more imaginative and interesting. | Avoids mixing metaphors. | Uses analogies to clarify and add emotional appeal to an argument. |
| | Bases analogies on a comparison of a partial similarity between otherwise unlike things. | Replaces dull, unnecessary adjectives with fresh adjectives and similes to make descriptions clear and vivid. | Form concrete modifiers by adding endings to strong nouns and verbs. |

| Cumulative Record Of:<br><br>Objectives: | Curriculum: Language Arts<br>Program of Study: Writing<br>Course of Study: Composition<br>Unit of Instruction: Exposition | | Goals: |
|---|---|---|---|
| Writing Facts and Opinions: | Defines a fact as an objective statement that can be tested or checked, an opinion as a subjective statement that expresses someone's feelings or ideas. | Uses facts that answer the questions who, what, when, where and why. | When writing a factual statement does not include opinions unless they are in quotations. |
| | Bases opinions on facts. | Uses specific nouns and verbs to make sentences clear and accurate. | |
| Making a Point: | Produces writing that informs, entertains, expresses feelings or opinions, or persuades. | Creates a positive or negative feeling when writing descriptions by using words that have positive or negative connotations. | Combines short sentences and omits words that are repeated often to give sentences and paragraphs better rhythm. |
| Point of View: | States a point of view is the way someone sees, thinks, or feels about something. | Uses a first person narrator to describe a person's personal experience using I, me, and my. | Uses the third-person subjective point of view to report the actions of another and their point of view. |
| | Uses the thirds-person omniscient point of view to explain more than one person's thoughts, feelings and motives. | | |

**COURSE DESCRIPTION**
**COLLEGE PREPARATORY BIOLOGY**
**(Grade 9)**

College Preparatory Biology is a molecular based first year Biology course. Emphasis will be on student awareness of biological principals and the scientific method of experimentation. The course topics will include concepts such as, The Characteristics of Living Things, Ecology, Chemistry of Life, Life of a cell, Photosynthesis, Genetics, Biotechnology Natural Selection, Bacteria, Plants, and Animals. A multi-sensory approach will be used. Study guides, graphic organizers, learning strategies, models, examples, teacher demonstrations, cooperative groups, Internet research projects, hands-on activities, student presentations, laboratory work and chapter tests will be included.

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>College Preparatory<br>Biology<br>The Science of Life | Goals |
|---|---|---|---|
| Principles Of Ecology | Summarizes the characteristics of living things. | Distinguishes between biotic and abiotic factors in the environment. | Compares the different levels of biological organization used in ecology. |
| | Explains the difference between a niche and a habitat. | Compares and contrasts the different types of symbiotic relationships. | Explains the matter and energy relationships shown by ecological pyramids. |
| | Displays the ability to state a problem, formulate a hypothesis and design a controlled experiment to test their hypothesis. | Identifies a control. | Identifies independent and dependent variables. |
| Community Distribution | Compares and contrasts primary and secondary succession. | Sequences the stages of succession in different communities. | Identifies the major limiting factors affecting the distribution of terrestrial biomes. |
| | Distinguishes among the terrestrial biomes. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Cells | | Goals: |
|---|---|---|---|
| Chemistry of Life: | Relates the particle structure of an atom to the identity of the elements. | Explains how isotopes differ. | Distinguishes between covalent, ionic, and hydrogen bonds. |
| | Relates water's polarity to its ability to dissolve substances. | Explains how polymers are formed and broken down in organisms. | Compares the chemical structures of carbohydrates, lipids, proteins and nucleic acids, and explains the importance of these substances in living things. |

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>College Preparatory<br>Biology<br>Cells | Goals: |
|---|---|---|---|
| Cell Biology | Identifies the main ideas of the cell theory. | Describes, compares and contrasts eukaryotic cells to prokaryotic cells. | Relates the structure and function of the parts of a typical eukaryotic cell. |
| | Relates the structure and function of the parts of a typical eukaryotic cell. | Compares and contrast plant and animal cells. | Identifies cell organization within a multi-cellular organism. |
| Homeostasis and Plasma Membrane. | Explains how a cell's plasma membrane functions. | Relates the function of the plasma membrane to the fluid mosaic model. | Explains how the processes of diffusion, passive transport, and active transport occur and why they are important to cells. |
| | Predicts the direction of diffusion of a dissolved substance. | Quantitatively and qualitatively measures the transport (osmosis and diffusion) of molecules across a semi-permeable membrane. | |

| Cumulative Record Of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Cells | | Goals: |
|---|---|---|---|
| Photo-synthesis And Cellular Respiration | Identifies the structure of a chloroplast. | Describes the interaction of white light with objects including chlorophyll molecules. | States the general equation for photosynthesis. |
| | Describes the light reactions of photosynthesis. | Describes how the products of the light reaction create the products of the Calvin cycle. | States the end results of photosynthesis. |
| | Determines the role of ATP in cellular reactions. | Identifies the structure of the mitochondria. | States the general equation for cellular respiration. |
| | Tells the purpose of cellular respiration. | Identifies the three stages of cellular respiration and tells where each takes place. | Identifies the products of each stage of cellular respiration. |
| | Analyzes the relationship between photosynthesis and cellular respiration. | Compares the ATP production of aerobic respiration and fermentation. | Describes the role of enzymes in the regulation of the cell cycle. |
| Cell Reproduction | Analyzes the reasons why cells are small. | Sequences the events of the cell cycle. | Describes the role of enzymes in the regulation of the cell cycle. |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Heredity and Genetics | | Goals: |
|---|---|---|---|
| Genetics | Analyzes the results obtained by Gregor Mendel in his experiments with garden peas. | Predicts the possible offspring of a monohybrid cross by using a Punnett square. | Analyzes how meiosis maintains a constant number of chromosomes in the body cells of the members of a species. |
| | Infers how meiosis leads to variation in a species. | Relates Mendel's laws of heredity to the events of meiosis. | |
| Genes<br>And Chromosomes | Determines how the structure of DNA enables it to reproduce itself accurately. | Relates the concept of the gene to the sequences of nucleotides in DNA. | Sequences the steps involved in protein synthesis. |
| | Categorizes the different kinds of mutations that can occur in DNA. | Compares the different kinds of mutations that can occur in cells and organisms. | |
| Applied Genetics | Distinguishes between incomplete dominant and co dominant alleles. | Compares multiple allelic inheritance and polygenic inheritance. | Summarizes how internal and external environments affect gene expression. |
| | Interprets testcrosses and pedigrees. | Evaluates the importance of plant and animal breeding to humans. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Heredity and Genetics | | Goals: |
|---|---|---|---|
| Heredity | Predicts how a human disorder is determined by a simple dominant allele. | Determines the human genetic disorders that are caused by inheritances of a simple recessive allele. | Compares multiple allelic, polygenic, and sex linked patterns of inheritance in humans. |
| | Distinguishes between autosomal and sex chromosome aneuploidy. | | |
| DNA Technology | Summarizes the steps used to engineer transgenic organisms. | Gives examples of applications and benefits of genetic engineering. | Analyzes how the completely mapped sequence of the human genome will advance human knowledge. |
| | Predicts the future applications of the human genome project. | Reviews the latest technology and the ethical issues that surround this new technology. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>College Preparatory<br>Biology<br>Describing Life | Goals: |
|---|---|---|---|
| Identifying Life | Summarizes the characteristics of living things. | Distinguishes between biotic and abiotic factors in the environment. | Compares the different levels of biological organization used in ecology. |
| | Explains the difference between a niche and a habitat. | Compares and contrast the different types of symbiotic relationships. | Explains the matter and energy relationships shown by ecological pyramids. |
| | Displays the ability to state a problem, formulate a hypothesis and design a controlled experiment to test their hypothesis. | Identifies a control. | Identifies independent and dependent variables. |
| Community Distribution | Compares and contrast primary and secondary succession. | Sequences the stages of succession in different communities. | Identifies the major limiting factors affecting the distribution of terrestrial biomes. |
| | Distinguishes among the terrestrial biomes. | | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Describing Life | | Goals: |
|---|---|---|---|
| Classification | Evaluates the history, methods, and purpose of taxonomy. | Demonstrates the use of concepts in classification. | Explains the purpose of a phylogenetic classification. |
| | Compares the six Kingdoms of organisms. | Distinguishes between the Kingdoms Eubacteria, Archaebacteria, Protista, Fungi, Plantae, and Animalia. | |
| Viruses And Bacteria | Designs an experiment to determine the effects of soap on bacterial growth. | Categorizes the different types of viruses. | Compares the different reproductive cycles of viruses. |
| | Identifies the structures of a bacteria cell. | Evaluates the economic importance of bacteria. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Describing Life | | Goals: |
|---|---|---|---|
| Evolution | Summarizes Darwin's theory of evolution by natural selection. | Relates the idea of natural selection to the origin of structural and physiological adaptations. | Summarizes the effect of the different types of natural selection on gene pools. |
| | Relates mechanisms of speciation to changes in genetic equilibrium. | Explains the role of natural selection in convergent and divergent evolution. | |
| | Relates mechanisms of speciation to changes in genetic equilibrium. | Explains the role of natural selection in convergent and divergent evolution. | |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Plants and Animals | | Goals: |
|---|---|---|---|
| Plants | Compares and contrast structures of monocots and dicots. | Identifies and describe the functions of roots, stems and leaves. | Identifies the structure of a flower. |
| | Outlines the processes of seed and fruit formation and seed germination. | | |
| Animals | Compares the characteristics of animals. | Sequences the development of a typical animal. | Distinguishes among the body plans of animals. |

| Cumulative Record of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>College Preparatory<br>Biology<br>Body Systems | Goals: |
|---|---|---|---|
| Protection, Support, Locomotion | Summarizes the importance of the skin in maintaining homeostasis in the body. | Outlines the healing process that takes place when the skin is injured. | Summarizes the effects that environmental factors and aging have on skin. |
| | Summarizes the structure and functions of the skeleton. | Compares the types of movable joints. | Explains how the skeleton forms. |
| | Distinguishes among the three types of muscles. | Explains the structure of a myofibril and summarize the sliding filament theory. | Explains the structure of a myofibril and summarize the sliding filament theory. |
| Digestion and Nutrition | Summarizes the digestive functions of the organs of the digestive system. | Outlines the pathway food follows through the digestive tract. | Summarizes the role of the six classes of nutrients in body nutrition. |
| Respiratory, Circulatory and Excretory Systems | Lists the structures in external respiration. | Explains the mechanics of breathing. | Distinguishes among the various components of blood among blood types. |
| | Traces the route blood takes through the body and heart. | Describes the structures and functions of the urinary system. | Explains the kidney's role in maintaining homeostasis. |

| Cumulative Record of:<br><br>Objectives: | Curriculum Science<br>Program of Study College Preparatory<br>Course of Study Biology<br>Unit of Instruction Body Systems | | Goals: |
|---|---|---|---|
| Nervous System | Identifies the structure of a neuron. | Summarizes the major parts of the nervous system/ central and peripheral. | Relates the process of a simple reflex arc. |
| | Compares the parasympathetic and sympathetic nervous systems. | | |
| Vertebrates | Compares and contrast the characteristics of different vertebrates. | | |

**COURSE DESCRIPTION**
**HONORS BIOLOGY**
**(Grade 9)**

Prerequisite: Must meet Honors Criteria
Honors Biology is a molecular based first year Biology course. It is anticipated that students selecting the Honors level will be able to achieve at a faster pace and deeper level than required in College Preparatory Biology. Emphasis will be on conceptual understanding, application of facts, and mathematical analysis of information in both laboratory and class work. Weekly lab reports are required. The course topics include Chemistry of Life, Life of a cell, Photosynthesis, Genetics, Biotechnology, Natural Selection, Bacteria, Plants, Animals and Ecology. Extensive independent reading is required.

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>Honors<br>Biology<br>Investigation | Goals |
|---|---|---|---|
| Classroom Safety | Recognizes any potential hazards associated with science activities and investigations, and understand the importance of maintaining a safe environment by behaving responsibly, wearing proper safety attire, and following all safety guidelines provided by the teacher. | | |
| Scientific Method | States a problem, formulates a hypothesis. | Designs a controlled experiment to test the hypothesis. | Identifies a control. |
| | Records measurements and observations using appropriate instruments and scientific equipment. | Uses current technology to gather data. | Creates and interpret graphs, charts, and experimental data from which predictions and conclusions will be drawn. |
| | Differentiates between independent and dependent variables. | Uses computer generated tables and graphs to organize and analyze data. | Cares for, sets up and makes observations with the various microscopes. Makes estimated measurements. |

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>Honors<br>Biology<br>Chemistry | Goals |
|---|---|---|---|
| Chemistry of Life | Relates the particle structure of an atom to the identity of the elements. | Describes the composition and related chemical behavior of some elements. | Describes the causes of covalent, ionic and hydrogen bonds. |
| | Explains how substances dissolve in water. | Relates the effect of pH to actions in living organisms. | Compares the chemical structures of carbohydrates, lipids, proteins and nucleic acids, and explain the importance of these substances in living organisms. |
| | Uses indicators to identify chemical changes and/or properties. | Explains how enzymes catalyze chemical reactions. | |
| Energy of life | Summarizes the characteristics of life. | Relates the flow of energy to photosynthesis and cellular respiration. | |
| Food Web | Diagrams and labels a food web and relate it to food pyramids. | Creates and labels a diagram | Relates the first and second laws of bioenergetics to their implications for living systems. |
| | Distinguishes between synthesis and decomposition reactions in metabolism. | | |

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>Honors<br>Biology<br>Life | Goals |
|---|---|---|---|
| Ecology | Compares primary and secondary succession. | Describes the major terrestrial biomes and tells their limiting factors. | Explains how carbon, nitrogen and water are recycled in an ecosystem. |
| Origin of Life | Predicts probable conditions on early Earth. | Evaluates hypothesis about the origin of life on Earth, citing evidence where possible. | Identifies probable characteristics of early life forms. |
| | Compares models for the origin of cell like structures. | Describes the fossil record for prokaryotes and eukaryotes. | |
| Classification<br>Cell Theory | Describes the classification hierarchies used to categorize organisms and tells how they relate to one another. | Explains homology and gives examples. | Compares and contrast the general characteristics of the Kingdoms. |
| | Predicts the effect of new knowledge on classification systems. | | |
| Cell Theory | Explains the basic tenets of the cell theory. | | |

# A CURRICULUM of UNQUESTIONABLE VALUE and LASTING RELEVANCE

by

Lee R. Smith

Teacher.....Bon Vivant

Volume Two

## THE RELEVANCE OF LEARNING

The Fostering of Mental Ability and a Common Mind.

"The inherent evil is in the overvaluing of the purely intellectual.
We must develop a new reverence for the irrational."
(A Prussian Secretary of Education between the wars.)

# Preface

I have said I am not an educational reformer but a conservator. Having developed a record system that increases teacher efficiency and enhances and accelerates student learning, the task is not finished. What is needed is a volume two that builds on this foundation with lessons that stimulate thought and motivates the student, through understanding, to learn, not for material gain or social approval but to satisfy an innate desire and biological imperative to do so. Developing fundamental learning skills and enhancing reasoning powers will nourish this joy of learning.

I have begun this process in the following volume. As before, it is for you to finish according to your needs, understanding and ability.

I wish you good teaching.

## The Year of Study

What this means to you

To insure you have acquired the knowledge deemed necessary for you to become a functioning member of society certain things will happen. In the state of New Jersey students are required to take a grade 4 Elementary School Proficiency Test, an 8th grade Early Warning Test and an 11th grade High School Proficiency Test to evaluate their learning. Other states are measuring their students by other means and schedules and there is presently an effort being made to develop a national test. As a result of this and other factors the instructional emphasis of your courses is subject to change as well as content requirements may be added or eliminated.

As you move through the year in this classroom you will be expected to achieve all the goals of your textbooks as well as those of additional material provided. If you do not accomplish this you will repeat the material and program until you demonstrate mastery of it.

Explanation of records.

So you and your parents may understand what learning is expected of you this year you are being presented with the curriculum for this coarse listing the skills and abilities to be developed. Keep in mind there may be some changes and additional material by essentially this is the plan we will follow.

This is what will determine if you pass the course. Take the curriculum home and explain it to your parents.

Using the Records Based Program

The following record and planning system solves the problem of accounting for learning and provides a substantial improvement in the planning for learning. It consists of a combined format of the teacher's grade and lesson plan books (fig.1) that is correlated with a similar revision of the school's curriculum guide and student cumulative record (fig.2).

The preparation of the curriculum guide/cumulative record requires a quantification of the user's course of study. Using the techniques of task analysis a concrete and continuous listing of the specific knowledge and performance abilities to be acquired and displayed by all students is tabulated in blocks of clear and concise instructional units (fig.3). The objectives of these units are then entered into the grade/lesson plan book as they are taught.

With this accomplished, specific learning experiences are selected and entered into the grade/lesson plan book for which grades are assigned (fig4).

Once a student demonstrates concept mastery a notation regarding this is made on the curriculum guide that then serves as an individual cumulative record (fig.5). By this means a permanent record of individual learning across the entire spectrum of the curriculum is established that accurately describes and specifically states what a student has learned and at what rate he is learning. This then provides a foundation to be built on with future learning.

Access to this type of information increases teacher efficiency and enhances and accelerates student learning and performance. This record system is then diagnostic of individual learning deficiencies and prescriptive of learning needs.

| Textbook:<br><br>Resources: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| Objectives: | | |
| Lessons: | | |
| Learning Experience: | | |
| Student: | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

(Fig.1)

| Cumulative Record of:<br><br>Objectives: | Curriculum:<br>Program of Study:<br>Course of Study:<br>Unit of Instruction: | Goals: |
|---|---|---|
| | | |

(Fig. 2)

| Cumulative Record Of:<br><br>Objectives: | Curriculum<br>Program of Study<br>Course of Study<br>Unit of Instruction | Science<br>Foundations of Science<br>Biology<br>Cells | Goals: |
|---|---|---|---|
| Cell Biology | Identifies the main ideas of the cell theory. | Describes, compares and contrasts eukaryotic cells to prokaryotic cells. | Relates the structure and function of the parts of a typical eukaryotic cell. |
| | Relates the structure and function of the parts of a typical eukaryotic cell. | Compares and contrast plant and animal cells. | Identifies cell organization within a multi-cellular organism. |
| Homeostasis and Plasma Membrane. | Explains how a cell's plasma membrane functions. | Relates the function of the plasma membrane to the fluid mosaic model. | Explains how the processes of diffusion, passive transport, and active transport occur and why they are important to cells. |

(Fig. 3)

| Textbook: The Science of Life<br><br>Resources: No Frills Science | Curriculum Science<br>Program of Study Foundations of Science<br>Course of Study Biology<br>Unit of Instruction Cells | Goals: |
|---|---|---|

| Objectives: | Photo-synthesis<br>And<br>Cellular Respiration |
|---|---|

| Lessons: | Identifies the structure of a chloroplast. | Describes the interaction of white light with objects including chlorophyll molecules. | States the general equation for photosynthesis. | Describes the light reactions of photosynthesis. |
|---|---|---|---|---|

| Learning Experiences: | S of L p. 21 | NFS p. 36 | S of L p. 30 | NFL p. 38 | S of L p. 45 | NFS p. 43 | Lab | S of L p. 48 | |
|---|---|---|---|---|---|---|---|---|---|
| Student: | | | | | | | | | |
| Amanda | A | A | A | A | A | A | | | |
| Andrea | A | A | B | A | A | A | | | |
| Dick | D | C | C | D | O | D | | | |
| Jane | C | D | D | D | D | O | | | |
| Puddrick | O | D | O | O | O | O | | | |

(Fig. 4)

A = 95-100% Mastery
B = 85-94% Knowledge
C = 80-84% Further instruction needed.
D = 0-79% Failure to obtain concept.
O = Assignment not completed

| Cumulative Record Of: Amanda<br><br>Objectives: | Curriculum Science<br>Program of Study Foundations of Science<br>Course of Study Biology<br>Unit of Instruction Cells | | Goals: |
|---|---|---|---|
| Photo-synthesis And Cellular Respiration | Identifies the structure of a chloroplast.<br><br>*5/7 LS* | Describes the interaction of white light with objects including chlorophyll molecules. *5/10 LS* | States the general equation for photosynthesis.<br><br>*5/18 LS* |
| | Describes the light reactions of photosynthesis. | Describes how the products of the light reaction create the products of the Calvin cycle. | States the end results of photosynthesis. |
| | Determines the role of ATP in cellular reactions. | Identifies the structure of the mitochondria. | States the general equation for cellular respiration. |
| | Tells the purpose of cellular respiration. | Identifies the three stages of cellular respiration and tells where each takes place. | Identifies the products of each stage of cellular respiration. |
| | Analyzes the relationship between photosynthesis and cellular respiration. | Compares the ATP production of aerobic respiration and fermentation. | Describes the role of enzymes in the regulation of the cell cycle. |
| Cell Reproduction | Analyzes the reasons why cells are small. | Sequences the events of the cell cycle. | Describes the role of enzymes in the regulation of the cell cycle. |

(Fig. 5)

# The Educational Needs of Society

## Why You Are Here

You, the student, are here to learn those things that will enable you to become a productive and contributing member of society. So you may better understand how these things have come about and what is expected of you, I am going to provide you with a brief history of the educational needs of society.

## Primitive Needs of Society

At some long distant time, people lived in small family groups of hunter-gatherer-fishers. Their educational needs served the interest of simple day-to-day survival and were taught within the group principally by example and learned through imitation. Society was based on tradition and necessary tasks were performed according to custom. Most cultural values were transmitted through the performance of rituals.

## Civilized Needs of Society

The transition from subsistence savagery to food producing barbarism and eventual civilization saw the development of agriculture, crafts, mathematics, written and spoken language and social-political organization on an increasingly higher and more complicated level with the function of ritual becoming institutionalized. Because of an increase in the food supply, created by more efficient means of production, people began to specialize in occupations and relied on others to provide those things they need and did not produce themselves. A student could enter into one of these specialized areas of knowledge by being apprenticed to someone within the extended family or by paying a fee to someone in need of extra help. This person then became responsible for the student's education.

The printing press, with its ability of cheap and mass production of books, provided the means of accomplishing a change in the educational needs of the masses by providing information to anyone who could read. In those areas of the Christian religion, there were two main reasons to learn to read.

The Protestant Reformation required the layman to study the Holy Bible independently to obtain his salvation. For craftsmen and other artisans, the availability of books eliminated the need for direct contact with a master as well as memory as the only means of obtaining and storing knowledge. The thought created by this new religious expression and information explosion increased the quantity, quality and affordability of goods and improved and created new processes and devices. This accelerated the rate of change in society with one effect being the conversion of what were once luxuries into necessities. Another effect was standardization of practices.

The ability to read and perform other basic skills such as math computations enhanced the value of the student seeking to enter a trade and the possibility of being accepted. To meet this need, communities and trade organizations began setting up secular schools and hiring teachers.

## Communities of Will

The survival and prosperity of communities and the stability of the affluent classes depends in a large part on their nations being well governed. To accomplish this, the leaders need knowledge of diverse things. This requires a liberal education covering many topics. With the re-emergence of democracies, it became necessary for the voting public to have the same liberal education as their leaders. This ensures the ability to make informed and consistent decisions based on common knowledge and understood needs of a culture, rather than those of special interest groups that may serve to weaken and fragment the nation.

Having a vested interest in the education of its citizens, government is the only agency capable of financing, organizing and insuring equal access by all its citizens of a universal and uniting education system. To meet the needs of government, this education system would have to be mandatory and free.

The goals of government sponsored education then should be:

1. Develop primary skills for entering into occupations.
2. Instill national identity and citizenship skills.
3. Prepare a collective, common mind for participation in the governing process.
4. Provide additional instruction a community deems valuable.

## The Needs of the Individual

The needs of the individual can vary from those of the government and society. The individual conforms to the rules and rituals of society when it benefits him to do so or the forces and effect of coercion, persuasion, education, religion and blunt force compels him to. When the will of society, as determined primarily by its leaders and dictates of culture conflicts with that of the determined individual, the individual frequently be is judged as criminal. Society then takes action to correct, punish or remove the individual.

A psychologist named Abraham Maslow proposed a theory concerning the needs of the individual centering on the phrase “self-actualization.” He believes people are innately good and that normal, healthy development depends upon fulfilling potentialities. Anything that blocks obtaining self-actualization makes a person frustrated and neurotic. Aggression and destruction are viewed as unnatural and the results of an environment that prevents the satisfaction of human needs. What Maslow considers true human needs he groups in an order of priority for obtainment:

Physiology - Satisfaction of hunger, thirst and sex.
Safety - Security, order and stability.
Belongingness and love.
Esteem - Including self-respect and feelings of success.
Self-actualization - The realization of one’s own full potential and satisfaction of the thirst for knowledge and beauty.

## The Global Community

From the first days of surplus food production and the resulting population growth, the trend, with some set backs, in human interactions has been towards the amalgamation of peoples into larger associated groups. This process is continuously being accelerated by improvements in communications and transportation and trade. Barring a disaster to civilization, the accelerated intellectual and educational exchange occurring between respectful civilizations will lead to the synthesis of a dominant, generalized global culture, communicating in two or three common languages that may eventually lead to an altogether new language.

This is occurring among the elite of societies, the social, political and business leaders. These are the trend and fashion setters who develop and implement policies and direct economic growth. They are disseminating this new culture to the masses through behavior modeling that leads to cultural reform and change. In some situations these leaders have become alienated from their parent cultures. As a result they are viewed with hostility and suspicion by the masses. This happens particularly when the elite attempt to force change through the application of law and taxation and can result in a fundamentalist cultural backlash.

By nature of its development as a land of immigrants, the United States of America is the melting pot of the world. For this reason, supported by its economic power, scientific leadership and entertainment industry, it has been in a position of leadership in establishing this global culture. For this reason it is accumulating resentment in varying degrees from the cultures it is encroaching on. The U.S. cultural domination is now being challenged by a united Europe and emerging China. The problems and methods these three mega cultures have had in absorbing and adjusting to internal diversity and local variations as they developed into nation states is the same that the global culture will encounter. This is not to say all other cultures will be abandoned. In the process of their assimilation they will contribute to the main culture and create local variations of it. Within these variations there will remain linguistic enclaves that preserve cultural heartlands.

It is the factor of recognized mutual interests and benefits that is presently the dominant cause of the amalgamation of diverse people into one. German and Japanese businessmen and investors are achieving the goals the soldiers of a previous generation failed to obtain. The U.S. is further achieving its manifest destiny doctrine through its economic power and Europe is uniting.

## The Role of Education

A civilization is a group of people cooperating together to enhance individual survival and quality of life through community well being. The unique consensual and imposed forms, rituals and symbols used by a community to give meaning and structure to social interactions is that group’s culture.

Through the operation of culture an individual is indoctrinated into specific modes of behavior and thought that reflect a coherent community worldview, philosophy and values. The directed and deliberate attempts at this are largely performed by institutions that provide routine services necessary for the day-to-day functioning of the community and oversees the performance of rituals and traditions.

The existence of formal education institutions indicates a community has the means and desire to perpetuate a certain view. The content of the education provided by the schools indicates the

priorities of the group operating it, reveals in what terms it regards the world around it and the direction in which the community considers that its own development should go. Confusion in the schools then is the results of confusion in the culture.

The task of education and the role of culture then are not separable things. Both serve the purpose of assimilating the individual into society as a functioning and contributing member. This is accomplished through the guided development of the individual in amassing diverse information and training in its application.

For educators to attempt to remove values and other cultural and sub cultural indicators from the curriculum results in a state sponsored nihilistic society. Many argue this results in the production of hedonistic sociopaths. At the same time there are those who wish to use the schools as a tool for social change according to what they think is best. The role of the school in a cooperative multicultural community concerning values then is to teach those that everyone can agree on such as truthfulness, honesty, hard work and family fidelity.

Such an education would have among its goals the following:

1. Recognize recurring patterns of human behavior and association.
2. Develop an understanding of the political, social and economic development of the world that provides a basis for political thought and activity.
3. Familiarize the student with the development and function of science and technology.
4. Identify how human behavior in recurring situations has led to change and innovation and the resulting social impact.
5. The students realize they are makers of themselves, develop self-responsibity and accountability.
6. Teach skills necessary for self directed study and learning.
7. Apply knowledge in adult situations.
8. Develop specialized and marketable knowledge and skills.

## Thought and the Individual

Philosophers and psychologist agree, with the exception of a few basic reflexes and automatic body functions, all actions are rooted in thought. A person is otherwise incapable of performing an act without having first thought in some fashion of doing it and then often does not do it well without practice. For this reason they advise controlling and directing your thoughts. Those thoughts that you chose and encourage have an effect on all aspects of your life: character, circumstance, health and happiness. By exercising this control, you create yourself. Knowing and believing this you are now able to direct your own mental growth and development rather than let it be something of chance. The following section's purpose is to assist you in this task.

## The Physiology of Anger

Inside our bodies there are two nervous system networks that keep our autonomic systems running as needed: breathing, food digestion, body temperature and such. Normally these two systems work in an equal balance. When out of balance there are observable physical conditions.

One branch of this automatic system, the parasympathetic, working in excess produces the symptoms seen in an old man sleeping in front of the television. This system slows your heart, increases saliva flow and allows the elastic walls of the breathing passages to constrict. The opposite extreme condition of the body, the fighting-ready, tensed and excited state comes about when the second branch of your automatic control system, the sympathetic, is operating on high.

This raises a fundamental question, what does it, what cause one system to shut down and the other to turn on high? Is anger an unstoppable sensation that comes over a person or can it be controlled?

These two networks are connected to the hypothalamus, an organ located near the base of the brain. A lot of what the hypothalamus does is fully automatic. It senses and regulates those and other activities mentioned earlier.

Connected to this is another part of the brain, the amygdala, which fires when you are angry. The nerve fibers connecting to this from other parts of the brain come not from the emotional centers but from the rational, thinking cortex and memory storage centers, This means your brain is constructed to keep your physical reactions to situations under your thinking, reasoning, control! You must first decide what will make you angry. When these situations are recognized as occurring, your brain produces commands to your body that results in the symptoms of anger, Anger then is not a consequence of blind emotion but the result of your brain switching the sympathetic system into high.

## Health and the Body

The body is the servant of the mind. It obeys the operations of the mind whether they be deliberately chosen or automatically expressed.

Sickly thoughts will express themselves through a sick body. Anxiety quickly demoralizes the whole body and lays it open to the entrance of disease. Impure thought, even if they are not indulged in, will soon shatter the nervous system.

Strong, pure and happy thoughts build the body in vigor and strength. The body will respond to the thoughts impressed upon it. Habits of thought will produce their own effect, good or bad.

If you would improve your body, you must guard your mind. Evil, wrong thoughts rob your body of its health.

## Character

You are what you think. Your character is the sum total of all your thoughts. Anger comes from forming and holding angry thoughts. Happiness is the result of happy thoughts.

Imagine you are leaving a crowded theater through a narrow door and someone steps on your toe. The angry thinker will become upset; he may even shout at or push the person he thinks did this. These actions do not repair the damage or eliminate the pain in the toe. If the other person is also an angry thinker, there is sure to be an argument, even a fight.

The happy thinker will not engage in this conduct. His shout of pain may draw the attention of the offender who, should he also be a happy thinker, will apologize. Perhaps this will lead to a conversation and a new friend. One action, two different possible reactions, which is better?

By the choice and true application of right thoughts, your life is improved. By the abuse and wrong application of thought, you become ugly and unpleasant. Between these two extremes are all the grades of character and you choose your own.

You are the master of your thoughts, the molder of your character, the maker and shaper of your condition, environment and future, Thought and character are one and the same. You hold within yourself the ability to become what you will. If you will watch, control and alter your thought, discover their effects on you and others, you will obtain understanding, wisdom and power.

## Circumstances

Your mind produces and absorbs thoughts. You may allow this process to occur haphazardly or choose those that are useful to you and ignore those that are destructive. By following this process, you will discover that you are the master of your soul, the director of your life. You will realize how thought shapes your character, circumstances and future.

Your soul attracts that which it truly desires and also that which it fears. Circumstances are the means by which the soul reveals itself. That circumstances grow out of thought becomes evident to anyone who spends time practicing self-control. The change in these circumstances occurs according to the amount of change in your thinking.

Every thought that you allow to exist in your mind eventually results in action. Good thoughts bring good results, bad thoughts bring bad actions. The outer world of circumstances shapes itself according to the inner world of thought.

A person does not send himself to jail by circumstances but by the path of groveling thoughts and mean methods of obtaining their desires. A good-minded person does not suddenly fall into crime by stress of any mere external force. The criminal thought had long been secretly kept in the heart and the hour of opportunity revealed its gathered power. Circumstances do not make you, they reveal you.

You do not receive what you want but what you earn. Your wishes and prayers are only answered when they are in harmony with your thoughts and actions. People who are anxious to improve their circumstances but are unwilling to improve themselves do not prosper. You are where you are by the law of your being. The thoughts that you have built into your character have made you who you are. In the arrangement of your life there is little element of chance. To change your life, you must change your thinking. You are the victim of circumstances, of things outside your control as long as you believe so.

## Purpose

Until thought is linked with purpose and knowledge there can be little intelligent accomplishment. If you have no central purpose in your life, you can fall as easy prey to petty worries, fears, troubles and self-pity. All of which leads, just as surely as deliberately planned sins (through a different road) to failure, unhappiness and loss.

You should conceive of a legitimate purpose in your heart, make it the central, main point of your thoughts, and set out to accomplish it. This is the method of establishing self-control and true concentration of thought. Even if you fail again and again to accomplish your purpose, as you must until weakness is overcome, the strength of character gained will be the true measure of your success. This will be a new starting point for future power and triumph.

To put aimlessness and weakness away and to begin to think with purpose and direction is to enter the ranks of the strong ones who only recognize failure as one of the pathways to attainment; who make all conditions serve them, and who think strongly, attempt fearlessly and accomplish masterfully.

Having conceived of a purpose, you should mentally mark out a straight pathway to its achievement. Doubts and fears can be planned for and so having been dealt with loses their power to stop you.

The will to do springs from the knowledge that you can do. Thought allied fearlessly to purpose becomes creative force. By these means, you become the conscious and intelligent wielder of your life and mental powers.

### Achievement

All that you achieve and all that you fail to achieve are the direct results of your own thoughts. Your weakness and strength are your own and nobody else's. They are brought about by your thoughts and actions or the lack of either. They can be altered only by you. Your condition is caused by you and you alone not by someone else. Your suffering and your happiness come from within. As you think, so you are. As you continue to think, so you remain. A strong man cannot help a weaker unless that weaker one is willing to be helped. Even then the weak person must become strong. He must, by his own efforts, develop the strength that he desires. None but he can alter his condition. He is limited only by the thoughts he chooses. So are you.

Achievement of any kind is the result of effort of action initiated by thought. By the aid of self-control, resolution and will directed thought you achieve. By the vice of indolence, corruption and confusion of thought you fail.

Successes obtained by right thought can only be maintained by watchfulness. Many give way when success is at hand and fall back into failure and weakness by becoming indolent, by allowing arrogant, selfish, lazy and corrupt thoughts to take possession of them.

All achievements, whatever they are, are the result of definitely directed thought, are governed by the same laws and are of the same method; the only difference lies in the object of obtainment.

### Thought from Others

This topic is one that will take more effort than I can afford right now, but must be addressed. During the war between Iran and Iraq, Iranian officials took students out of elementary schools and gave them each a plastic key from a baby's toy. The students were told it was the key to heaven and ensured they would go there. They were then told to run across a minefield to clear the way for soldiers.

The idea I wish to convey is that to avoid being used and abused by others, you must learn to think for yourself and discover your own truths by your own reasoning.

## The Development of Thought and Reason

### Thought and Language

Language has a great deal to do with thought and intelligence. Language not only allows people to express their thinking but is largely responsible for determining their thoughts. In other words, we tend to think those thoughts for which we have language. Thoughts that we are incapable of verbalizing do not occur to us or are at best not very well formed. Large vocabulary then is essential for abstract thought and communication.

## Early Thought

Based on studies of ape behavior and speculations by psychologists there has been some guessing as to what may have been going on n the minds of very primitive, prespeech people. Until language had sufficiently developed there could have been little thinking beyond the here and now of actual experience, much like that of animals. No clear distinction was made between living and non-living things: if a stick struck you, you kicked it; if the river flooded, it was angry. Primitive thought was at the level of a very bright four or five year old.

One concept that would have been present is fear of the old man, the tribal leader, as the beginning of social wisdom. Objects associated with him were forbidden, enforced with violence by him, much as a child today may not be allowed to sit in Dad's chair or touch his pipe or his gun. The idea of something forbidden, of being taboo then is very fundamental to the thought process of early people.

Another fundamental idea that probably arose in early people's minds concerns infectious diseases and the idea of being accurst. From that, too, may have come the idea of avoiding certain places and persons in particular stages of health.

As soon as speech developed it may have gotten to work upon such fundamental feelings and begun to systematize them. By talking together people would reinforce and elaborate each other's fears and dreams and establish a common tradition of taboos, of things forbidden and unclean. With the idea of uncleanness would come ideas of cleansing and of removing curses. In such things would lay the beginnings of religion.

Another common factor influencing the development of these diverse first cultures is the average age of the population. When we speak of the old we are not referring to the old of today in their 70's and 80's. For these primitive people life was short. A person in their 30's was old with few seeing much beyond that. The majority of the population was in their teens. This means the mental maturity level, the ability for thought was not fully developed by those originating the culture.

The capacity for telling things increased with vocabulary. The simple individual fancies and fundamental taboos of primitive people began to be handed on and made into a more consistent belief system. People began telling stories about themselves, the tribe-past and present, taboos and why they had to be, about the world, how it functions, how it came to be and their place in it. In achieving this overall view their explanatory theories gave structure to natural phenomena and classified nature into a coherent system that described what they thought it did, how it functioned. People began to be trained from their youth with thoughts given to them. Indoctrinated into specific modes of behavior and thought, a community mind was developed that served to bind them together with a particular outlook on life from which much deviance was not allowed.

These things then, being common to the experience of everyone, help form the common grounds for the development of cultures.

## Thought in Children

Children, like primitive people, still have to learn to think; they do a large part of this by imagination, the natural way of the untrained mind. It is a flow of images with which the

impulses to act are connected. It is spontaneous and uncontrolled, similar to dreaming. Many adults never learn to think in a much better way with any consistency.

## Reason and Logic

With an increasing vocabulary abstraction becomes possible to the growing mind. People can then reason things out instead of dreaming them out. They begin to control their predispositions and observe a logical coherence of cause and effect. They change from responsive imagination to logical thinking. From this developed the idea that people are able, if they are willing, to change their way of living.

Eventually, accredited to Aristotle, came the ability to reason through syllogism, the use of which would help avoid erroneous conclusions. The use of a syllogism is to take two known facts and produce a third unknown fact. Reaching these conclusions involves two forms of reasoning, induction and deduction. Induction takes the thinker from the particular to the general. Deduction goes the other way, taking general information to discover something specific. In both methods the truth of statements ensures the necessary conclusion.

## Deduction

Jones belongs to the CIO
All members of the CIO pay dues

Therefore, Jones pays dues.

## Inductive

Water passes through holes
Water passes through skin

Skin has holes.

It is this yes or no thinking that our modern world is built upon.

Communication

The Power of Language

Before we can educate you, we must be able to communicate through a powerful medium unique to human beings, spoken language. This power is difficult to measure. Its use and influence can best be understood through a demonstration. Make yourself comfortable and listen to the story I am going to tell you.

I want you to close your eyes and imagine it is winter outside. I have gone to the window and broken off an ice sickle, it is long, cold and bluish white. Imagine that long cold stick of ice here in my hands. Can you see it, my fingers turning red from the cold as it melts and drips between them? I walk around the classroom, stop by your desk and slide it down your back!

Now imagine I am scraping my fingernails across the blackboard!

Did you feel something; did you react to either of the things I said? If you did, then you experienced the power of language. Your imagination made you react. It was triggered and guided by my words. What are some similar effects you have experienced?

If your understanding of words were not similar to my understanding of their meaning, then communication would be difficult, limited and confusing.

Think of times when someone has said something to you, I'm sure there have been many, when what they were saying was unclear or you completely misunderstood them.

In this class you will be expected to speak and write clearly for the purpose of being understood. In other words, say what you mean and mean what you say.

Discussion Concerning Communication.

Here the students should engage in an open ended discussion on each of the various listed topics.

Voice inflection
Facial expression and body language
Appearance and dress
Vocabulary size
Jargon and technical language
Sign language
Communication with animals and between animals
Written Language
The importance of communication within a cooperative society

The concluding idea to this section is that language makes human communication possible on a scale far above that of animals and is something that should be practiced and done correctly.

## A Child's Acquisition of Language

Now that you have an intuitive feel for the power of language, imagine or try to remember what it was like to be a small child who has not yet learned speech. Think of what a tremendous difference it makes in an infant's life when it finally can verbally interact with others.

To get from there to here the child goes through different language developmental phases. It first cries, develops a repertoire of gestures and babbles. This is followed by producing meaningful sounds known as phonemes that are consonants and vowels. The sounds it does not hear it does not practice and learn to produce such as "lt", a sound in the Navajo language.

The infant then learns to combine these sounds producing morphemes, the units of meaning in language, words. At first these are mostly nouns: daddy, ball, food and so on. To this they learn to add verbs such as go and adjectives such as big or blue along with adverbs and prepositions.

Organizing words into meaningful sentences requires the child develops an intuitive knowledge of syntax, the grammar of language. What is meant by this is the set of rules governing the combination of words that will be meaningful and correct for the speakers of that language or dialect of it.

As children practice and master phonemes, morphemes and syntax they must also practice prosody. This is the manner of expression, the intonations, the accents, pauses and all the subtle variations that give different meanings to the same morphemes.

Phonemes, morphemes, syntax and prosody are the elements of language. These things you have been learning through example and imitation as you have grown and developed your power of speech. By making you more aware of this process we hope to improve your language development and teach you Standard English.

## The Origins of Language

Early humans had to invent language. Its development may have followed a path similar to that by which a child acquires language. Its origins probably lie in the sounds of alarm and passion that animals make. Development beyond this is possible due to intelligence and a physical vocal system that allows the controlled production of a variety of sounds. Using these two abilities these early people learned to imitate sounds made by or heard in association with their environment. The use of these sounds, probably as nouns, accompanied by gestures and intonation constituted the first languages.

The students of language, philologists, are able to trace common features in groups of languages. Within these groups are similar root words and ways of expressing an idea. In contrast there are other groups that area dissimilar down to their fundamental structure that express action and relationships by entirely different devices and altogether different grammatical schemes. For those groups with similarities that are so numerous and precise that they can not be contributed to chance or explained by borrowing or universal features a hypothesis has been drawn that these languages are descended from a common or original prot-language.

## The Indo-European Language Family

One great language family totals approximately half the world's population, covers nearly all of North America, most of Europe and stretches out to India. It includes English, Persian and various Indian languages. It is for this reason it is called Indo-European. The same fundamental roots and grammatical ideas are traceable through this family. Compare for a example:

| | | |
|---|---|---|
| English | father | mother |
| German | vater | mutter |
| Greek | pater | matter |
| French | pe're | me're |
| Armenian | hair | mair |
| Sanscrit | pitar | matar |

Now consider the case of religion. For the Indo-European speaking society we can reconstruct with certainty the word for God, deiw-os and the two word name of their chief deity, dyeu-pater. In the different languages of this family it took slightly different forms.

| | |
|---|---|
| Latin | Jupiter |
| Greek | Zeus Pater |
| Sanskrit | Dyaus Pitar |

The forms dyea and deiw-os are both derivations of a root deiw meaning to shine and appearing in the word day in many languages. Tae notion of a father deity was therefore linked to the notion of a bright sky.

These languages then are not different things, they are variations of one. The people who use these languages think in the same way. In this way language is intimately linked to culture. It is at the same time an expression of culture and a part of it.

## Differentiation of Language

Language, like other important patterns of human behavior, slowly but constantly evolves from older forms into newer ones. Compare the language in the King James Bible with that of English spoken today and a vast difference is immediately noticeable. When different groups of people speaking one language become separated not just by time but also by geography and environment as well as political and social barriers, each group begins to develop its own culture and variety of the language. So long as the developing differences between varieties do not make mutual comprehension impossible we call them dialects of the same language.

The tendency of language throughout the early years of human expansion and population growth as tribal units broke up and migrated away from each other was to split into dialects and then into dialects of dialects. In time these things became mutually incomprehensible and were thought of as separate languages belonging to alien people.

## The Development of English

As s specific example of what has been said about language we will trace the development of English. About 1,500 years ago three closely related tribes speaking a variety of Northern Germanic migrated to the island of Great Briton. So complete was their conquest during the 5th Century that few words of the related Celtic language being spoken in the island at that time survive in English. Latter invasions by Latin speaking Romans and then by Vikings, mostly Danes, and their occupation of large areas of the country had the linguistic results of a great deal of exchange and assimilation between the languages. Much the same has been going on in the southwest of the United States between American English and the Mexican variety of Spanish. Much of the cowboy's vocabulary comes from the Spanish.

Another drastic change occurred with the total political conquest of the Normans. Because of their small numbers in relationship to the native population their French dialect id not supplant English. The replacement of the native upper classes by the French speakers however resulted in English losing its cultural linguistic center. English continued to exist as an unwritten language of peasants and laborers. It fell back from being more of a standard language into diversifying dialects of isolated communities and regions.

To communicate with their subject people it was necessary for the minority French speaking upper class to also speak English. With political isolation from the mainland they eventually adapted English as their own language. This process was accelerated by the Black Death. With one out of every four people killed it became necessary to replace French speaking government officials with others who spoke only English. Because the vocabulary of peasants and laborers is not sufficient for the administration of government many French words were retained and adopted into English to meet this need.

This reestablishment of English in the 13th and 14th centuries once again made a standard English dialect inevitable. The capital being established in London, its variety became the standard dissimilated out to the other areas through the operations of government and other groups that benefited from headquartering near the seat of power and finance.

American English is descended from the variety of English brought to the British colonies of North American in the 17th century. In a new biosphere with its many new things, needs and experiences coupled with interaction with non—European speaking natives and other peoples and separated from its parent language, American English began to evolve its own dialects. With the expansion of the nation, the addition of other populations in quantity speaking other languages and the advancement of technology requiring further vocabulary development American English further differentiated from British English that was itself changing.

As has been shown by this history, the fate of a language is that of its speakers. English in 1750 was a language of minor importance. A hundred years latter it had become a major world language. It evolved to meet the needs of its people; of administering an empire as well as those of culture and scientific developments. All this requires a standard language, adequate vocabulary and grammar and dictionaries to fix the meaning of words so as to facilitate communication and understanding.

It is because of these met needs that in this age of mass and simultaneous communication, easy travel and world trade that English, along with a few other languages, is becoming a global common language. The mastery of Standard English by its native speakers in all its suppleness and complexities is essential for participation in an international of learning and cooperation. China alone has more English speaking people than the United States. The amount of international mail and telexes written in English, global text stored in English and internet home pages and e-mails written in English range between 68 and 80 percent. The alternatives for individuals and communities that do not master the English language can be found in this history.

The average English speaking person's conversation is made up of the most frequently used 737 words. The number of words they actually recognize and understand is between 10,000 and 20,000. This is not a difficult task to accomplish.

## Useful and Necessary Skills

### Memory

How many times have you been told to or tried to remember something and you didn't. How many times have you struggled for hours to remember a school lesson; a spelling list, steps in a mathematical procedure, the parts of the inner ear, only to receive a low grade? Up until now no one has taught you how to cultivate your memory forcing you to rely on natural memory, drill and repetition. We will remedy that problem now.

It is by improving you memory that you improve your ability to think. By the process of memory you take information and make it a part of yourself. An unread book full of information sitting on a shelf is simply that, it is not of you.

By developing your memory you will improve your ability to organize, retain and recall any type of information, quickly and accurately. You will learn quicker, have better confidence in yourself and increase your understanding of many things. Memory then is the mother of all wisdom.

### Chaining Technique

To demonstrate your present memory ability I am giving you a list of 20 words. Read them, put the list aside and see how many you can recall.

| | | | |
|---|---|---|---|
| Doll | stove | bike | car |
| Book | can | bridge | cat |
| Cup | bell | hole | candle |
| Trumpet | rock | knife | face |
| Saw | belt | wire | rug |

The usual results is 5 to 7 words, rarely more than 10.

To use the chaining technique link each item together in the order you wish to remember them like the links of a chain. You do this by telling a story using strong mental images with each item acting on the next.

In your mind's eye, see the list of words I am going to give you. Shoe, tree, money, ladder, pig, suitcase, tomatoes, cactus, dress, golf club, flag, tent, bus, fire hydrant, jewels, boat, chain, desk, stapler, ink pens.

See a shoe, any shoe you are familiar with. Out of this shoe a tree is growing, see the tree. On this tree instead of leaves is money. Leaning against the tree is a ladder. On this ladder is a pig. The pig is carrying a suitcase. The suitcase comes open and out of it falls tomatoes. The tomatoes fall on a cactus and get stuck on its spines. The cactus is wearing a dress. The cactus wearing a dress is swinging a golf club. At the end of the golf club is a flag. It can be any flag, just one you know. The flag comes off and lands on a tent. Inside the tent is a bus, any bus of your choosing. The bus comes out and crashes into a fire hydrant. The fire hydrant breaks and begins to pour out jewels. The jewels come down into a boat. The boat takes off but does not go far because there is a chain holding it back. The chain is connected to a desk. On the desk is a stapler. Inside the stapler instead of staples there are ink pens.

Now repeat the story. Now repeat the word list. Did you get all 20? If you can remember a nonsense list like this imagine how it can help with a meaningful list. Practice this technique often and you will not only become better at it but will expand its usefulness.

Location-Association Technique

With this technique you associate what it is you wish to remember with known objects. Picture in your mind a location you know well such as your own home. See yourself walking through it. Look carefully at everything there. Now, place the items you wish to remember there. A grocery list; look at your refrigerator, open it and see it empty. Place in it what you wish to remember, eggs, milk. Look in the cabinets, they're empty. Place in them what is on the list and goes there. An alternative is to simply walk in the front door and on the couch place eggs, on top of the TV milk and so on. The more you practice the better you develop your imagination and ability to use details.

This example was but one variation of location association. With practice you will realize it is best to tour your memory location in the same order going from room to room, object to object.

Phonetic-Numeral Technique

Using this technique you can quickly and easily commit any numeral data to memory. This is done by changing the numbers into phonetic sounds that are then turned into words.

Here is a list of numbers and their corresponding sounds and a memory cue of my choosing. You may later wish to devise your own memory cues.

| | | |
|---|---|---|
| 1 | B, P | ball |
| 2 | C, K, G hard sound as in ing. | kitchen |
| 3 | D,T, Th | dog |
| 4 | F, Ph | phone |
| 5 | J, Ch, Sh, soft G | jail |
| 6 | L | lake |
| 7 | M | money |

| | | |
|---|---|---|
| 8 | N | nuts |
| 9 | R | river |
| 0 | S, Z | snake |

Memorize the provided list using good mental images then use the letter sounds in place of the numbers. Using vowels form a word sentence. For example, 5 could be shu, a shoe; 39 tre, a tree. Don't worry about correct spelling, we're using phonetic spelling.

If you choose to make a sentence then 22011660 changes to CKSBBLLS and a sentence could be CoKe haS BuBLLeS. Your words and sentences can be nonsensical, that is nonsensical to others. They must have meaning to you so as to be memorable. Think of other variations using sounds in place of numbers, see what works best for you and practice it. Always remember, the root word of imagination is image.

The Death of Memory

Before the printed book, Memory ruled daily life and learning for through it all knowledge was preserved. For this reason it was useful for everyone to cultivate the arts of artificial memory using techniques similar to those previously discussed. Memory was considered the "mother of all wisdom".

After the printed book many of the things of every day life once ruled and served by Memory became governed by the printed page. Books served as an aide and sometimes as a substitute for Memory. In addition, what ever was in print could be available to anyone who could read. Such a person could refer to this information any time needed without having to first learn it and storing it within himself. Some of the consequences of this were predicted two millennia earlier when Socrates lamented the effects of writing on the memory and soul of the learner. He recounts how Thoth, the Egyptian god who invented letters, had misjudged the effect of his invention. Thoth was thus reproached by the god Tamus, then King of Egypt:

This discovery of yours will create forgetfulness in the learner's souls, because they will not remember of themselves. The specific which you have discovered is an aide not to memory, but to reminiscence, and you give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company, having the show of wisdom without the reality.

It is for this reason that so many people lack a depth of understanding of beliefs that they are ready to fight about. Many people, in positions of authority, when asked questions concerning their beliefs and philosophy have given back simplistic and general statements or worse, contradictory and incoherent garble.

I have argued with these people who did not realize I was quoting from a framed statement on their wall or from an official brochure in their reception room or employee manual. I have had people who profess to be devote Christians become angry and hostile towards me when I have explained St. Augustine's postulation that Christianity and astrology are not compatible; astrology denies free will and therefore personal responsibility thus invalidating Jesus' death on the cross. They do not know their own minds and therefore speak not words but bark like dogs.